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NEWS 3	JAN 24	The new and enhanced DPCI file on STN has been released
NEWS 4	JAN 26	Improved Timeliness of CAS Indexing Adds Value to USPATFULL and USPAT2 Chemistry Patents
NEWS 5	JAN 26	Updated MeSH vocabulary, new structured abstracts, and other enhancements improve searching in STN reload of MEDLINE
NEWS 6	JAN 28	CABA will be updated weekly
NEWS 7	FEB 23	PCTFULL file on STN completely reloaded
NEWS 8	FEB 23	STN AnaVist Test Projects Now Available for Qualified Customers
NEWS 9	FEB 25	LPCI will be replaced by LDPCI
NEWS 10	MAR 07	Pricing for SELECTing Patent, Application, and Priority Numbers in the USPAT and IFI Database Families is Now Consistent with Similar Patent Databases on STN
NEWS 11	APR 26	Expanded Swedish Patent Application Coverage in CA/CAplus Provides More Current and Complete Information
NEWS 12	APR 28	The DWPI (files WPINDEX, WPIDS and WPIX) on STN have been enhanced with thesauri for the European Patent Classifications
NEWS 13	MAY 02	MEDLINE Improvements Provide Fast and Simple Access to DOI and Chemical Name Information
NEWS 14	MAY 12	European Patent Classification thesauri added to the INPADOC files, PCTFULL, GBFULL and FRFULL
NEWS 15	MAY 23	Enhanced performance of STN biosequence searches
NEWS 16	MAY 23	Free Trial of the Numeric Property Search Feature in PCTFULL on STN
NEWS 17	JUN 20	STN on the Web Enhanced with New Patent Family Assistant and Updated Structure Plug-In
NEWS 18	JUN 20	INPADOC databases enhanced with first page images
NEWS 19	JUN 20	PATDPA database updates to end in June 2011
NEWS 20	JUN 26	MARPAT Enhancements Save Time and Increase Usability
NEWS 21	JUL 25	STN adds Australian patent full-text database, AUPATFULL, including the new numeric search feature.
NEWS 22	AUG 01	CA Sections Added to ACS Publications Web Editions Platform
NEWS 23	AUG 16	INPADOC: Coverage of German Patent Data resumed, enhanced legal status
NEWS 24	AUG 18	Upgrade now to STN Express, Version 8.5
NEWS 25	SEP 01	CAS Journal Coverage Now Includes Ahead-of-Print Articles for More Than 100 Journal Titles
NEWS 26	SEP 01	Older Versions of STN Express to be Discontinued Beginning in March 2012

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 NEWS EXPRESS 18 AUGUST 2011 CURRENT WINDOWS VERSION IS V8.5,
              AND CURRENT DISCOVER FILE IS DATED 24 JANUARY 2011.

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FILE 'HOME' ENTERED AT 11:33:15 ON 09 SEP 2011

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Choice (Y/n):
Switching to the Registry File...
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index.  Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of
commands which can be used in this file.

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                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     1.15       1.15

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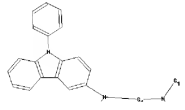

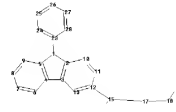

chain nodes :
15 17 18 19 21 22
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13 23 24 25 26 27 28
chain bonds :
1-23 12-15 15-17 15-19 17-18 18-21 18-22
ring bonds :
1-2 1-5 2-3 2-10 3-4 3-13 4-5 4-6 5-9 6-7 7-8 8-9 10-11 11-12 12-13
23-24 23-28 24-25 25-26 26-27 27-28
exact/norm bonds :
1-2 1-5 1-23 12-15 15-17 15-19 17-18 18-21 18-22
exact bonds :
3-4
normalized bonds :
2-3 2-10 3-13 4-5 4-6 5-9 6-7 7-8 8-9 10-11 11-12 12-13 23-24 23-28
24-25 25-26 26-27 27-28
isolated ring systems :
containing 1 :

G1:Cb,Hy

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 15:CLASS 17:CLASS 18:CLASS 19:CLASS 21:CLASS
22:CLASS 23:Atom 24:Atom
25:Atom 26:Atom 27:Atom 28:Atom

L1 STRUCTURE UPLOADED

=> s l1 sss full
FULL SEARCH INITIATED 11:36:43 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 6112 TO ITERATE

100.0% PROCESSED 6112 ITERATIONS 284 ANSWERS
SEARCH TIME: 00.00.01

L2 284 SEA SSS FUL L1

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 196.86 198.01

FILE 'CAPLUS' ENTERED AT 11:36:48 ON 09 SEP 2011
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 9 Sep 2011 VOL 155 ISS 12
FILE LAST UPDATED: 8 Sep 2011 (20110908/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2011
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2011

CAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2011.

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=> s l2
L3 42 L2

=> d l3 ibib abs hitstr 1-
YOU HAVE REQUESTED DATA FROM 42 ANSWERS - CONTINUE? Y/(N):y

L3 ANSWER 1 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:958583 CAPLUS Full-text
DOCUMENT NUMBER: 155:256594
TITLE: Organic electroluminescent device
INVENTOR(S): Masui, Kensuke; Kinoshita, Masaji; Ise, Toshihiro
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Tokkyo Koho, 77pp.
CODEN: JTXXFF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 4741028	B1	20110803	JP 2010-157352	20100709
PRIORITY APPLN. INFO.:			JP 2010-157352	20100709

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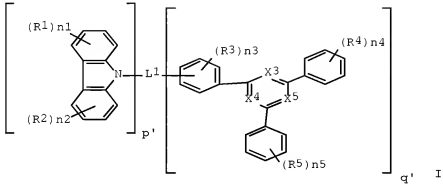
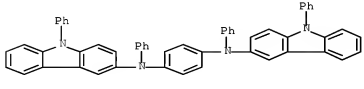


AB The invention refers to an organic electroluminescent device comprising a compound I [X3-5 = N, or methylene; and the ring containing X3-5 is a pyridine or pyrimidine; L = single bond or benzene; R1-5 = F, Me, Ph, cyano, pyridyl, pyrimidyl, silyl, carbazolyl, or tert-butyl; n1 - n5 = 0 or 1; p' = 1 or 2; q = 1] in at least one layer of the organic layer between the light emitting layer and the cathode, and a carbazole subst. biphenylamine in at least one layer of the organic layer between the light emitting layer and the anode.

IT 887403-00-1 887403-08-9 887403-10-3
887403-12-5 887403-15-8 1314889-62-7
1314889-63-9
RL: TEM (Technical or engineered material use); USES (Uses)
(organic electroluminescent device)

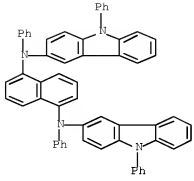
RN 887403-00-1 CAPLUS

CN 1,4-Benzenediamine, N1,N4-diphenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

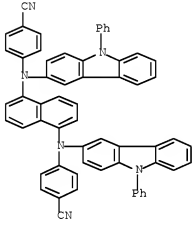


RN 887403-08-9 CAPLUS

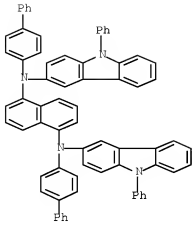
CN 1,5-Naphthalenediamine, N1,N5-diphenyl-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



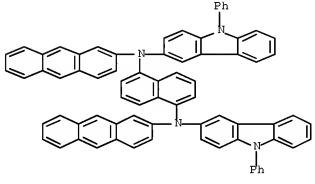
RN 887403-10-3 CAPLUS
CN Benzonitrile, 4,4'-[1,5-naphthalenediylbis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



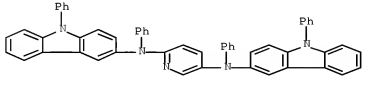
RN 887403-12-5 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis([1,1'-biphenyl]-4-yl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



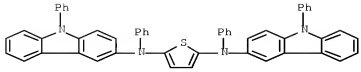
RN 887403-15-8 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-di-2-anthracenyl-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 1314889-62-7 CAPLUS
CN 2,5-Pyridinediamine, N2,N5-diphenyl-N2,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 1314889-63-8 CAPLUS
CN 2,5-Thiophenediamine, N2,N5-diphenyl-N2,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



L3 ANSWER 2 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:942813 CAPLUS Full-text
DOCUMENT NUMBER: 155:316659
TITLE: Aromatic amine compound as an hole injection/transport material and/or electroluminescent host material for organic electroluminescent devices
INVENTOR(S): Choi, Dae Hyeok; Kim, Dong Ha; Park, Jeong Hwan
PATENT ASSIGNEE(S): Duksan Hi-Metal Co., Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 32pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2011084798	A	20110726	KR 2010-4539	20100118
PRIORITY APPLN. INFO.:			KR 2010-4539	20100118

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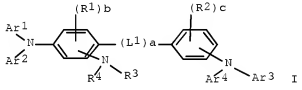
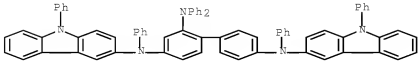


AB The invention relates to a compound shown in chemical formula I (L1 = single bond, C1-50 substituted or unsubstituted alkyl, C1-50 substituted or unsubstituted alkenyl, C5-60 substituted or unsubstituted aryl, etc.; a for L1 = 0-3; R1 = H, halogen, cyano, substituted or unsubstituted C1-50 alkyl, substituted or unsubstituted C1-50 alkoxy, etc.; b for R1 = 1-3; R2 = H, halogen, cyano, alkoxy, thiol group, substituted or unsubstituted C1-50 alkyl, substituted or unsubstituted C1-50 alkoxy, etc.; c for R2 = 1-4; Ar1 to Ar4 = substituted or unsubstituted C2-50 alkenyl, substituted or unsubstituted C4-60 aryl, C2-50 alkenyl unsubstituted or substituted by S, N, O, P or Si, etc.), an organic electronic element using the compound, and a terminal.

IT 1325636-41-6P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(aromatic amine compound as an hole injection/transport material and/or electroluminescent host material for organic electroluminescent devices)

RN 1325636-41-6 CAPLUS

CN [1,1'-Biphenyl]-2,4,4'-triamine, N2,N2,N4,N4'-tetraphenyl-N4,N4'-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



L3 ANSWER 3 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:900500 CAPLUS Full-text
DOCUMENT NUMBER: 155:226958
TITLE: Organic electroluminescent device
INVENTOR(S): Kinoshita, Masaji; Ise, Toshihiro
PATENT ASSIGNEE(S): Fujifilm Corp., Japan
SOURCE: Jpn. Tokkyo Koho, 82pp.
CODEN: JTXXFF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 4729641	B1	20110720	JP 2010-153498	20100705
PRIORITY APPLN. INFO.:			JP 2010-153498	20100705

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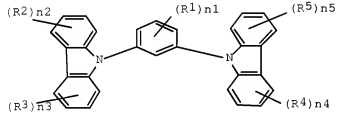

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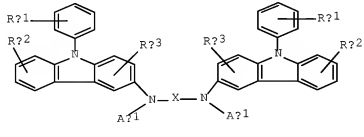


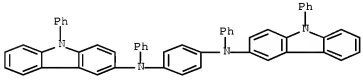
II

AB The invention relates to an organic electroluminescent device, comprising: an electroluminescent layer containing a substance represented by I [R1 = alkyl,

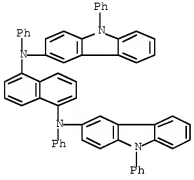
aryl, and not including carbazolyl and perfluoroalkyl; R2-R5 = alkyl, aryl, silyl, cyano, and F; n1 = 1-4 integer; n2-n5 = 0-4 integer]; and an organic layer disposed between the electroluminescent layer and an anode, containing a substance represented by II [X = arylene, divalent pyridyl, and divalent thienyl; RH1, RH1', RH2, and RH2' = H, halo, alkyl, aryl, pyridyl, and cyano; AH1 and AH1' =aryl and pyridyl].

IT 887403-00-1 887403-08-9 887403-10-3
887403-12-5 887403-15-8 1314889-62-7
1314889-63-8
RL: TEM (Technical or engineered material use); USES (Uses)
(hole injection material; organic electroluminescent device)

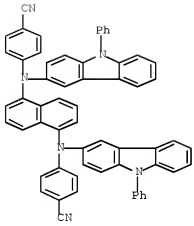
RN 887403-00-1 CAPLUS
CN 1,4-Benzenediamine, N1,N4-diphenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



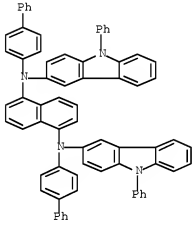
RN 887403-08-9 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-diphenyl-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



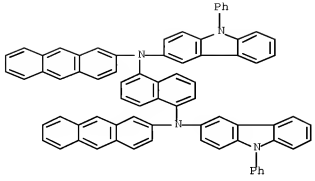
RN 887403-10-3 CAPLUS
CN Benzonitrile, 4,4'-[1,5-naphthalenediylbis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



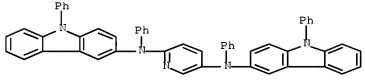
RN 887403-12-5 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis([1,1'-biphenyl]-4-yl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



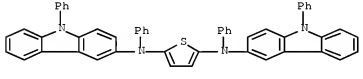
RN 887403-15-8 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-di-2-anthracenyl-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 1314889-62-7 CAPLUS
CN 2,5-Pyridinediamine, N2,N5-diphenyl-N2,N5-bis(9-phenyl-9H-carbazol-3-yl)-
(CA INDEX NAME)



RN 1314889-63-8 CAPLUS
CN 2,5-Thiophenediamine, N2,N5-diphenyl-N2,N5-bis(9-phenyl-9H-carbazol-3-yl)-
(CA INDEX NAME)



L3 ANSWER 4 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:896217 CAPLUS Full-text
DOCUMENT NUMBER: 155:286622
TITLE: Aromatic host compound for organic electroluminescent device
INVENTOR(S): Je, Jong Tae; Lee, Se Jin; Ma, Myeong Geun; Lee, Sang Hae
PATENT ASSIGNEE(S): SFC Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 42pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2011081698	A	20110714	KR 2010-1984	20100108
PRIORITY APPLN. INFO.:			KR 2010-1984	20100108

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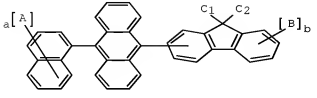


I

AB The title organic electroluminescent component using a host compound as shown in formula I has excellent brightness, a high color purity, and long service life, where A, B, C1, and C2 are individually selected from hydrogen, deuterium, substituted or unsubstituted C1-20 alkyl groups, substituted or unsubstituted C6-40 aryl groups, substituted or unsubstituted C3-20 heteroaryl groups, germanic groups, boric groups, substituted or unsubstituted C1-24 alkylsilyl groups, and substituted or unsubstituted C6-40 arylsilyl groups; a is an integer (0-7); b is an integer (1-7); plural A or B are the same or different from each other, when a and b are larger than 2.

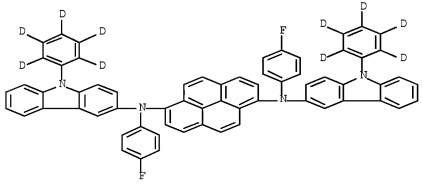
IT 1214262-90-4

RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)

(aromatic host compound for organic electroluminescent device)

RN 1214262-90-4 CAPLUS

CN 1,6-Pyrenediamine, N1,N6-bis(4-fluorophenyl)-N1,N6-bis[9-(phenyl-2,3,4,5,6-d5)-9H-carbazol-3-yl]- (CA INDEX NAME)



L3 ANSWER 5 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER: 2011:775014 CAPLUS Full-text

DOCUMENT NUMBER: 155:167933

TITLE: Indoloacridine derivative as an electroluminescent

host material for organic electronic element

INVENTOR(S): Park, Jeong Hwan; Kim, Dae Seong; Park, Yong Uk; Kim, Gi Won; Jung, Hwa Sun; Kim, Won Sam; Byun, Ji Hun; Choi, Dae Hyeok; Kim, Dong Ha

PATENT ASSIGNEE(S): Duksan Hi-Metal Co., Ltd., S. Korea

SOURCE: Repub. Korean Kongkae Taeho Kongbo, 47pp.
CODEN: KRXXA7

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

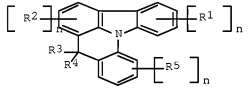
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 20110066763	A	20110617	KR 2009-123541	20091211

PRIORITY APPLN. INFO.: KR 2009-123541 20091211

OTHER SOURCE(S): MARPAT 155:167933

GI



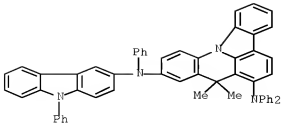
I

AB The title compound containing indoloacridine is shown in chemical formula I, wherein, R1 and R2 are H, substituted or unsubstituted C1-50 alkyl, substituted or unsubstituted C1-50 alkoxy, substituted or unsubstituted C1-50 alkenyl, or substituted or unsubstituted C5-60 arylene groups; R3-R5 are H, halogen, cyano, alkoxy or thiol groups; X is S, O or Si; n1 and n2 are 0-4 integers; n3 is a 0-3 integer.

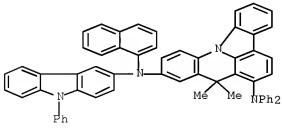
IT 1313415-47-2 1313415-48-3 1313415-49-4
1313415-50-7 1313415-67-6 1313415-68-7
1313415-69-8 1313415-70-1
RL: TEM (Technical or engineered material use); USES (Uses)
(indoloacridine derivative as an electroluminescent host material for organic
electronic element)

RN 1313415-47-2 CAPLUS

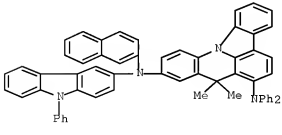
CN 8H-Indolo[3,2,1-de]acridine-7,10-diamine, 8,8-dimethyl-N7,N7,N10-triphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



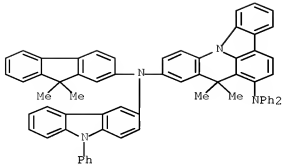
RN 1313415-48-3 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-7,10-diamine,
8,8-dimethyl-N10-1-naphthalenyl-N7,N7-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



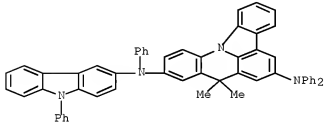
RN 1313415-49-4 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-7,10-diamine,
8,8-dimethyl-N10-2-naphthalenyl-N7,N7-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



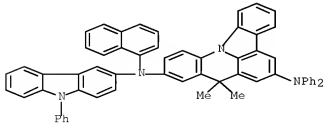
RN 1313415-50-7 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-7,10-diamine,
N10-(9,9-dimethyl-9H-fluoren-2-yl)-8,8-dimethyl-N7,N7-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



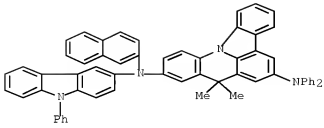
RN 1313415-67-6 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-6,10-diamine,
8,8-dimethyl-N6,N6,N10-triphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA
INDEX NAME)



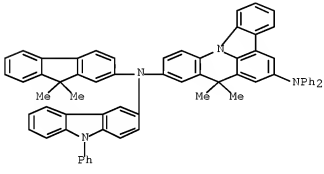
RN 1313415-68-7 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-6,10-diamine,
8,8-dimethyl-N10-1-naphthalenyl-N6,N6-diphenyl-N10-(9-phenyl-9H-carbazol-3-
yl)- (CA INDEX NAME)



RN 1313415-69-8 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-6,10-diamine,
8,8-dimethyl-N10-2-naphthalenyl-N6,N6-diphenyl-N10-(9-phenyl-9H-carbazol-3-
yl)- (CA INDEX NAME)



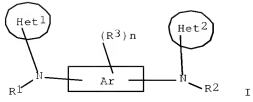
RN 1313415-70-1 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-6,10-diamine, N10-(9,9-dimethyl-9H-fluoren-2-yl)-8,8-dimethyl-N6,N6-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



L3 ANSWER 6 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:695780 CAPLUS Full-text
DOCUMENT NUMBER: 155:79444
TITLE: Heteroaryl amine compound as an electroluminescent material for organic light-emitting diode
INVENTOR(S): Je, Jong Tae; Jung, Seong Uk; Kim, Nam I.; Lee, Sang Hae
PATENT ASSIGNEE(S): SFC Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 90pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2011057078	A	20110531	KR 2010-116234	20101122
PRIORITY APPLN. INFO.:			KR 2009-113298 A	20091123
OTHER SOURCE(S):	MARPAT 155:79444			

GI

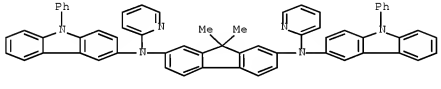


I

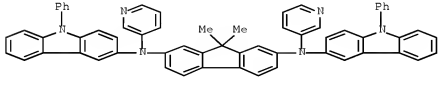
AB The title heteroaryl amine compound is shown in chemical formula I (Ar = substituted/unsubstituted biphenyl, substituted/unsubstituted fluorenyl, or substituted/unsubstituted tetrahydro pyrenyl; R1, R2 and R3 = H, D, halogen, cyano, substituted/unsubstituted C1-20 alkyl, substituted/unsubstituted C6-40 aryl, substituted/unsubstituted C3-20 heteroaryl, germanium group, boron group, substituted/unsubstituted C1-24 alkyl silyl, or substituted/unsubstituted C6-40 aryl silyl; n = integer of 0-20; if n is larger than 2, several R3 can be identical or different; Het1 and Het2 = substituted/unsubstituted C3-20 heteroaryl; Het1 and Het2 contain at least one N, resp.). The title organic light-emitting diode can be driven at low voltage, and has good brightness.

IT 1311307-31-9 1311307-63-7 1311307-95-5
1311308-39-0 1311308-74-3 1311309-32-6
1311309-47-3
RL: TEM (Technical or engineered material use); USES (Uses)
(heteroaryl amine compound as an electroluminescent material for organic light-emitting diode)

RN 1311307-31-9 CAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-dimethyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-N2,N7-di-2-pyridinyl- (CA INDEX NAME)

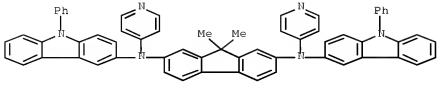


RN 1311307-63-7 CAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-dimethyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-N2,N7-di-3-pyridinyl- (CA INDEX NAME)

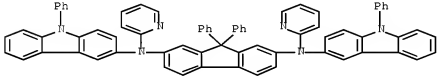


RN 1311307-95-5 CAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-dimethyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-

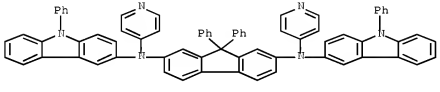
N2,N7-di-4-pyridinyl- (CA INDEX NAME)



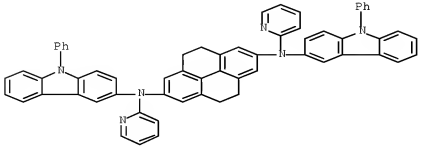
RN 1311308-39-0 CAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-diphenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-N2,N7-di-2-pyridinyl- (CA INDEX NAME)



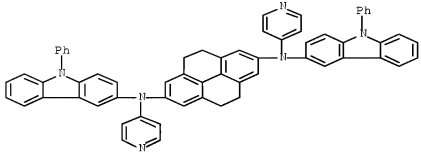
RN 1311308-74-3 CAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-diphenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-N2,N7-di-4-pyridinyl- (CA INDEX NAME)



RN 1311309-32-6 CAPLUS
CN 2,7-Pyrenediamine, 4,5,9,10-tetrahydro-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-N2,N7-di-2-pyridinyl- (CA INDEX NAME)



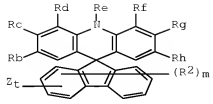
RN 1311309-47-3 CAPLUS
CN 2,7-Pyrenediamine, 4,5,9,10-tetrahydro-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-N2,N7-di-4-pyridinyl- (CA INDEX NAME)



L3 ANSWER 7 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:622014 CAPLUS Full-text
DOCUMENT NUMBER: 154:604315
TITLE: Novel compound having condensed rings for organic electronic devices
INVENTOR(S): Kim, Kong-Kyeom; Lee, Jae-Chol; Kim, Ji-Eun; Nam, Hyun; Jang, Jun-Gi; Jeon, Byung-Sun
PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
SOURCE: PCT Int. Appl., 49pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2011059271	A2	20110519	WO 2010-KR8013	20101112
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
KR 2011053114	A	20110519	KR 2009-109940	20091113

PRIORITY APPLN. INFO.: KR 2009-109940 A 20091113
OTHER SOURCE(S): MARPAT 154:604315
GI



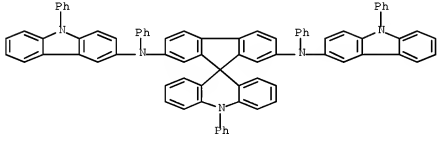
I

AB The present invention relates to a novel compound having condensed rings represented by [I; where t = 1, 2; Z = substituted carbazole; m = 1-7; R2 = H, D, aryl, heterocycle, arylamine, etc.; Ra-Rh = H, D, alkyl, aryl, heterocycle, arylamine, etc.]. Since the compound according to the present invention can be used as an organic layer material of an organic electronic device, and particularly is effective for the injection, transport or extraction of holes, an organic electronic device with excellent efficiency and performance can be provided.

IT 1304131-80-3P 1304131-82-5P 1304131-84-7P
1304131-86-9P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(hole injection layer; novel compound having condensed rings for organic electronic devices)

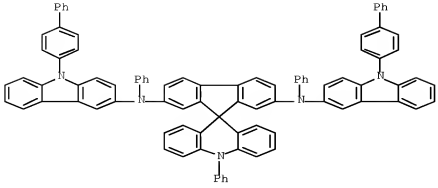
RN 1304131-80-3 CAPLUS

CN Spiro[acridine-9(10H),9'-[9H]fluorene]-2',7'-diamine, N2',N7',10-triphenyl-N2',N7'-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

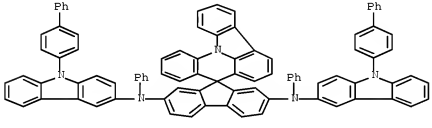


RN 1304131-82-5 CAPLUS

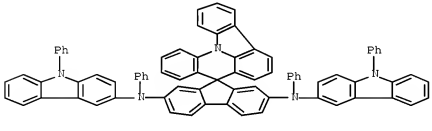
CN Spiro[acridine-9(10H),9'-[9H]fluorene]-2',7'-diamine, N2',N7'-bis(9-[1,1'-biphenyl]-4-yl-9H-carbazol-3-yl)-N2',N7',10-triphenyl- (CA INDEX NAME)



RN 1304131-84-7 CAPLUS
CN Spiro[9H-fluorene-9,8'-[8H]indolo[3,2,1-de]acridine]-2,7-diamine, N2,N7-bis(9-[1,1'-biphenyl]-4-yl-9H-carbazol-3-yl)-N2,N7-diphenyl- (CA INDEX NAME)

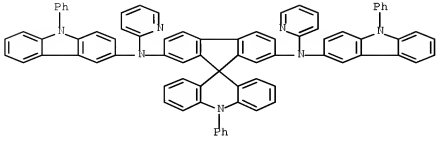


RN 1304131-86-9 CAPLUS
CN Spiro[9H-fluorene-9,8'-indolo[3,2,1-de]acridine]-2,7-diamine, N2,N7-diphenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

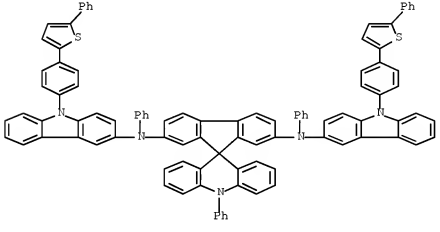


IT 1304132-28-2 1304132-30-6 1304132-32-8
1304132-34-0 1304132-36-2 1304132-38-4
1304132-56-6 1304132-58-8
RL: TEM (Technical or engineered material use); USES (Uses)
(novel compound having condensed rings for organic electronic devices)
RN 1304132-28-2 CAPLUS
CN Spiro[acridine-9(10H),9'-[9H]fluorene]-2',7'-diamine,

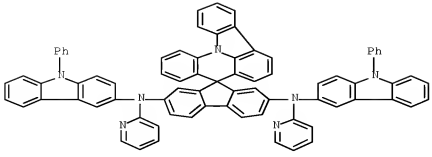
10-phenyl-N2',N7'-bis(9-phenyl-9H-carbazol-3-yl)-N2',N7'-di-2-pyridinyl- (CA INDEX NAME)



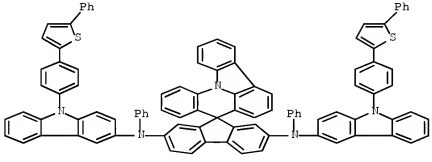
RN 1304132-30-6 CAPLUS
CN Spiro[acridine-9(10H),9'-[9H]fluorene]-2',7'-diamine, N2',N7',10-triphenyl-N2',N7'-bis[9-[4-(5-phenyl-2-thienyl)phenyl]-9H-carbazol-3-yl]- (CA INDEX NAME)



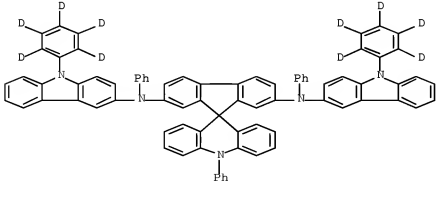
RN 1304132-32-8 CAPLUS
CN Spiro[9H-fluorene-9,8'-[8H]indolo[3,2,1-de]acridine]-2,7-diamine, N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-N2,N7-di-2-pyridinyl- (CA INDEX NAME)



RN 1304132-34-0 CAPLUS
CN Spiro[9H-fluorene-9,8'-indolo[3,2,1-de]acridine]-2,7-diamine, N2,N7-diphenyl-N2,N7-bis[9-[4-(5-phenyl-2-thienyl)phenyl]-9H-carbazol-3-yl]- (CA INDEX NAME)

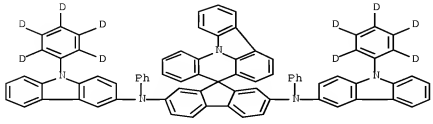


RN 1304132-36-2 CAPLUS
CN Spiro[acridine-9(10H),9'-[9H]fluorene]-2',7'-diamine, N2',N7',10-triphenyl-N2',N7'-bis[9-(phenyl-2,3,4,5,6-d5)-9H-carbazol-3-yl]- (CA INDEX NAME)

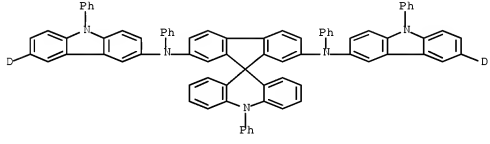


RN 1304132-38-4 CAPLUS
CN Spiro[9H-fluorene-9,8'-[8H]indolo[3,2,1-de]acridine]-2,7-diamine,

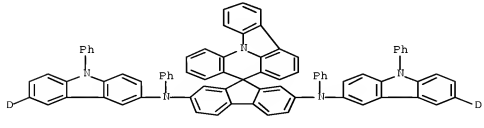
N2,N7-diphenyl-N2,N7-bis[9-(phenyl-2,3,4,5,6-d5)-9H-carbazol-3-yl]- (CA INDEX NAME)



RN 1304132-56-6 CAPLUS
CN Spiro[acridine-9(10H),9'-[9H]fluorene]-2',7'-diamine, N2',N7',10-triphenyl-N2',N7'-bis(9-phenyl-9H-carbazol-3-yl-6-d)- (CA INDEX NAME)



RN 1304132-58-8 CAPLUS
CN Spiro[9H-fluorene-9,8'-indolo[3,2,1-de]acridine]-2,7-diamine, N2,N7-diphenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl-6-d)- (CA INDEX NAME)

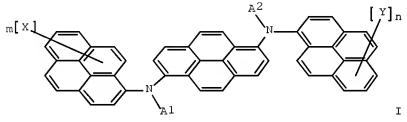


L3 ANSWER 8 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:530558 CAPLUS Full-text
DOCUMENT NUMBER: 154:553428
TITLE: Aromatic compound as an electroluminescent material for organic electroluminescent device

INVENTOR(S): Je, Jong Tae; Lee, Se Jin; Park, Seok Bae; Lee, Sang Hae
PATENT ASSIGNEE(S): SFC Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 26pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2011041725	A	20110422	KR 2009-98694	20091016
PRIORITY APPLN. INFO.:			KR 2009-98694	20091016

OTHER SOURCE(S): MARPAT 154:553428
GI

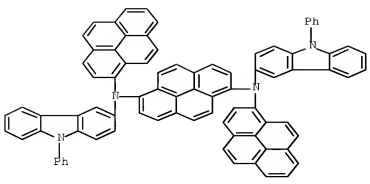


I

AB The present invention refers to aromatic compound shown in chemical formula I, and organic electroluminescent device using the compound In chemical formula I, A1, A2, X, and Y, are sep. H, deuterium, substituted or unsubstituted C1-20 alkyl, substituted or unsubstituted C6-40 aryl, or substituted or unsubstituted C3-20 heteroaryl; m and n are integers of 0-9; plural Xs or Ys are identical or different when m or n is larger than 2. The organic electroluminescent device has high brightness and high color purity.

IT 1297594-48-9
RL: TEM (Technical or engineered material use); USES (Uses)
(aromatic compound as an electroluminescent material for organic electroluminescent device)

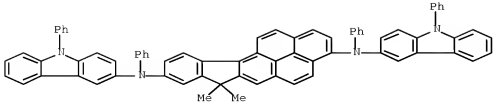
RN 1297594-48-9 CAPLUS
CN 1,6-Pyrenediamine, N1,N6-bis(9-phenyl-9H-carbazol-3-yl)-N1,N6-di-1-pyrenyl- (CA INDEX NAME)



L3 ANSWER 9 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:457230 CAPLUS Full-text
DOCUMENT NUMBER: 154:472555
TITLE: Condensed-cyclic compound and organic light emitting diode including organic layer containing the condensed-cyclic compound
INVENTOR(S): Kim, Hee-Yeon; Yang, Seung-Gak; Lee, Kwan-Hee
PATENT ASSIGNEE(S): Samsung Mobile Display Co., Ltd., S. Korea
SOURCE: Eur. Pat. Appl., 47pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 2308843	A1	20110413	EP 2010-181070	20100928
R: AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, BA, ME, RS				
KR 2011039108	A	20110415	KR 2009-96393	20091009
US 20110084256	A1	20110414	US 2010-895732	20100930
JP 2011079822	A	20110421	JP 2010-225742	20101005
CN 102040589	A	20110504	CN 2010-10503420	20101009
PRIORITY APPLN. INFO.:			KR 2009-96393 A	20091009

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 154:472555
AB The present invention provides a condensed-cyclic 7H-indeno[1,2-a]pyrene derivative and an organic light emitting diode including a 7H-indeno[1,2-a]pyrene derivative
IT 1288952-41-9P
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(condensed-cyclic compound and organic LEDs)
RN 1288952-41-9 CAPLUS
CN 7H-Indeno[1,2-a]pyrene-3,9-diamine, 7,7-dimethyl-N3,N9-diphenyl-N3,N9-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

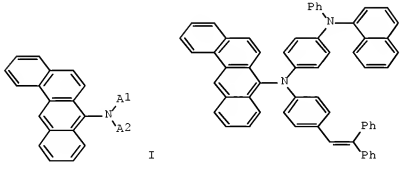


REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 10 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:371406 CAPLUS Full-text
DOCUMENT NUMBER: 154:384962
TITLE: preparation of 1,2-benzo[a]anthracene derivatives as organic electroluminescent materials
INVENTOR(S): Qiu, Yong; Li, Jianren; Li, Yinkui
PATENT ASSIGNEE(S): Beijing Visionox Technology Co., Ltd., Peop. Rep. China; Kunshan Visionox Display Technology Co., Ltd.
SOURCE: Faming Zhuanli Shenqing, 89pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101987822	A	20110323	CN 2009-10090379	20090807
PRIORITY APPLN. INFO.:			CN 2009-10090379	20090807

OTHER SOURCE(S): MARPAT 154:384962
GI



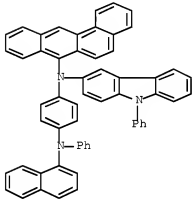
I II

AB The invention provides a process for preparation of 1,2-benzo[a]anthracene derivs. I [wherein A1 and A2 = independently (un)substituted aryl] as materials for organic electroluminescent materials (OLEDs). For example, II was prepared in a multi-step synthesis. OLED containing II showed low driving voltage of 6.72 V and high luminous efficiency of 9.57 lm/W.

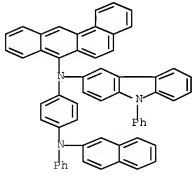
IT 1279122-27-8P 1279122-29-0P 1279122-31-4P

1279122-33-6P 1279122-35-8P 1279122-37-0P
1279122-40-5P 1279122-41-6P 1279122-42-7P
1279122-43-8P 1279122-44-9P 1279122-45-0P
1279122-46-1P 1279122-47-2P 1279122-62-1P
1279122-63-2P 1279122-64-3P 1279122-65-4P
1279122-66-5P 1279122-67-6P 1279122-68-7P
1279122-69-8P 1279122-70-1P 1279122-71-2P
1279122-72-3P 1279122-73-4P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of 1,2-benzo[a]anthracene derivs. as organic electroluminescent materials)

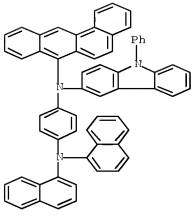
RN 1279122-27-8 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4-1-naphthalenyl-N4-phenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



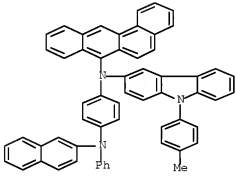
RN 1279122-29-0 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4-2-naphthalenyl-N4-phenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



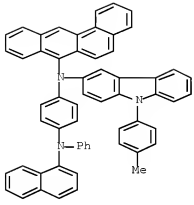
RN 1279122-31-4 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-di-1-naphthalenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 1279122-33-6 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]-N4-2-naphthalenyl-N4-phenyl- (CA INDEX NAME)

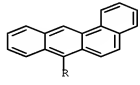


RN 1279122-35-8 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]-N4-1-naphthalenyl-N4-phenyl- (CA INDEX NAME)

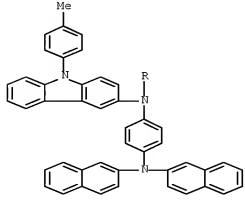


RN 1279122-37-0 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]-N4,N4-di-2-naphthalenyl- (CA INDEX NAME)

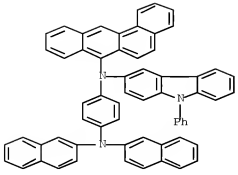
PAGE 1-A



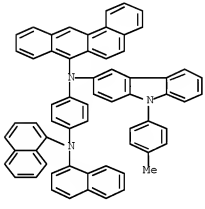
PAGE 2-A



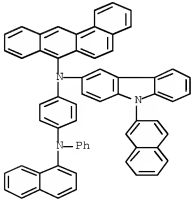
RN 1279122-40-5 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-di-2-naphthalenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



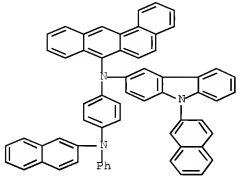
RN 1279122-41-6 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]-N4,N4-di-1-naphthalenyl- (CA INDEX NAME)



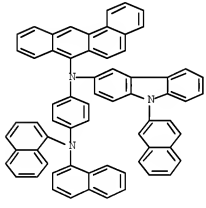
RN 1279122-42-7 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4-1-naphthalenyl-N1-[9-(2-naphthalenyl)-9H-carbazol-3-yl]-N4-phenyl- (CA INDEX NAME)



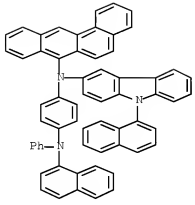
RN 1279122-43-8 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4-2-naphthalenyl-N1-[9-(2-naphthalenyl)-9H-carbazol-3-yl]-N4-phenyl- (CA INDEX NAME)



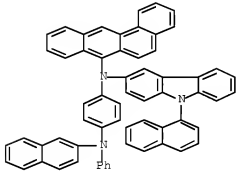
RN 1279122-44-9 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-di-1-naphthalenyl-N1-[9-(2-naphthalenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



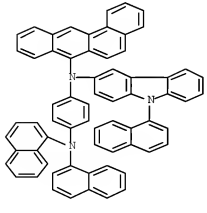
RN 1279122-45-0 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4-1-naphthalenyl-N1-[9-(1-naphthalenyl)-9H-carbazol-3-yl]-N4-phenyl- (CA INDEX NAME)



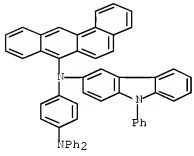
RN 1279122-46-1 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4-2-naphthalenyl-N1-[9-(1-naphthalenyl)-9H-carbazol-3-yl]-N4-phenyl- (CA INDEX NAME)



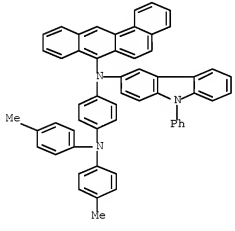
RN 1279122-47-2 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-di-1-naphthalenyl-N1-[9-(1-naphthalenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



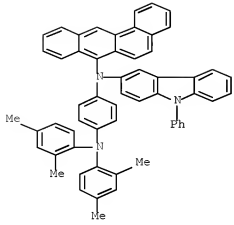
RN 1279122-62-1 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-diphenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



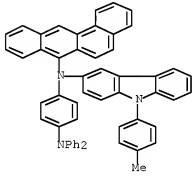
RN 1279122-63-2 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(4-methylphenyl)-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



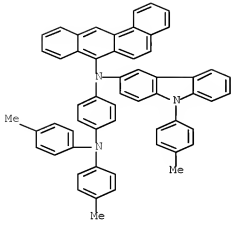
RN 1279122-64-3 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(2,4-dimethylphenyl)-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



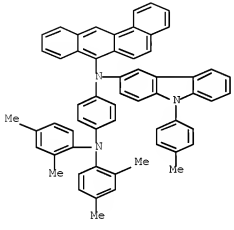
RN 1279122-65-4 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]-N4,N4-diphenyl- (CA INDEX NAME)



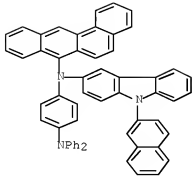
RN 1279122-66-5 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(4-methylphenyl)-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



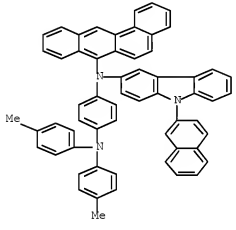
RN 1279122-67-6 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(2,4-dimethylphenyl)-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



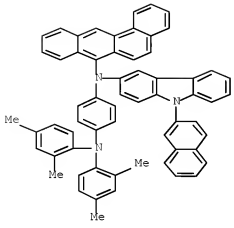
RN 1279122-68-7 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(2-naphthalenyl)-9H-carbazol-3-yl]-N4,N4-diphenyl- (CA INDEX NAME)



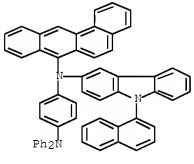
RN 1279122-69-8 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(4-methylphenyl)-N1-[9-(2-naphthalenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



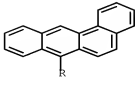
RN 1279122-70-1 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(2,4-dimethylphenyl)-N1-[9-(2-naphthalenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



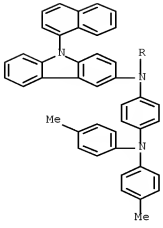
RN 1279122-71-2 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(1-naphthalenyl)-9H-carbazol-3-yl]-N4,N4-diphenyl- (CA INDEX NAME)



RN 1279122-72-3 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(4-methylphenyl)-N1-[9-(1-naphthalenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)

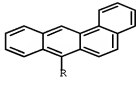


PAGE 2-A

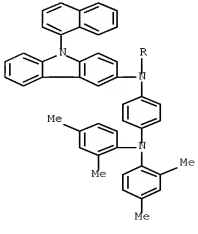


RN 1279122-73-4 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(2,4-dimethylphenyl)-N1-[9-(1-naphthalenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)

PAGE 1-A



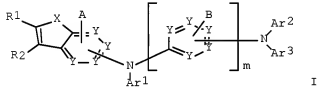
PAGE 2-A



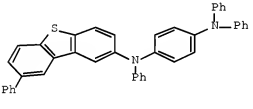
L3 ANSWER 11 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2010:1480875 CAPLUS Full-text
DOCUMENT NUMBER: 154:45886
TITLE: Preparation of arylamino compounds for organic electronic elements
INVENTOR(S): Choi, Dae Hyeok; Kim, Dae Seong; Park, Yong Uk; Jung, Hwa Sun; Kim, Dong Ha; Park, Jeong Hwan
PATENT ASSIGNEE(S): Duksan Hi-Metal Co., Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 32pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2010123172	A	20101124	KR 2009-42234	20090514
PRIORITY APPLN. INFO.:			KR 2009-42234	20090514

OTHER SOURCE(S): MARPAT 154:45886
GI



I



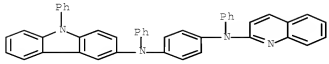
II

AB The title compound I [A = (R3)n; B = (R4)n; R1-R4 = independently H, halogen, cyano, etc.; Ar1-Ar3 = (un)substituted C2-50 alkenyl, (un)substituted C6-50 arylene, (un)substituted C4-60 aryl, etc.; X = N, O, S, P and Si; Y = C, N, O and S; n = 0-4; m = 1-3] was prepared For example, II was prepared in a multistep synthesis. I was claimed useful for organic elec. elements such as OLED, organic solar cell, OPC, organic TFT, etc.

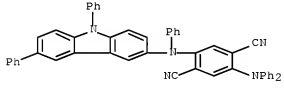
IT 1258015-37-0P 1258015-43-8P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of arylamino compds. for organic electronic elements)

RN 1258015-37-0 CAPLUS
CN 1,4-Benzenediamine, N1,N4-diphenyl-N1-(9-phenyl-9H-carbazol-3-yl)-N4-2-

quinolinyl- (CA INDEX NAME)



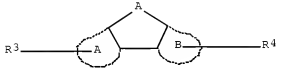
RN 1258015-43-8 CAPLUS
CN 1,4-Benzenedicarbonitrile, 2-(diphenylamino)-5-[(6,9-diphenyl-9H-carbazol-3-yl)phenylamino]- (CA INDEX NAME)



L3 ANSWER 12 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2010:721918 CAPLUS Full-text
DOCUMENT NUMBER: 153:73018
TITLE: Novel organic electroluminescent compounds and organic electroluminescent device using the same
INVENTOR(S): Kim, Chi Sik; Shin, Hyo Nim; Cho, Young Jun; Kwon, Hyuck Joo; Kim, Bong Ok; Kim, Sung Min; Yoon, Seung Soo
PATENT ASSIGNEE(S): Gracel Display Inc., S. Korea
SOURCE: PCT Int. Appl., 153pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2010064871	A1	20100610	WO 2009-KR7238	20091204
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
KR 2010064712	A	20100615	KR 2008-123276	20081205

EP 2202283 A1 20100630 EP 2009-156605 20090330
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, RS
PRIORITY APPLN. INFO.: KR 2008-123276 A 20081205
OTHER SOURCE(S): CASREACT 153:73018; MARPAT 153:73018
GI

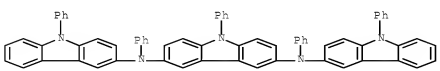


I

AB Provided are novel organic electroluminescent compds., R1Ar1LAr2R2 [L = I; A = -N(R71)-, -S-, -O-, -Si(R72)(R73)-, -P(R74)-, -C:O-, B(R75)-, -In(R76)-, -Se-, Ge(R77)(R78)-, Sn(R79)(R80)-, or -Ga(R81)-; ring A = monocyclic or polycyclic C6-60 aromatic ring; ring B = anthracene; Ar1,2 = bond, C6-60 arylene, C3-60 heteroarylene, 5- or 6-membered heterocyloalkylene, C3-60 cycloalkylene, C2-60 alkenylene, alkynylene, C1-60 alkyleneoxy, C6-60 aryleneoxy or arylenethio; R1,2 = H, D, halo, C1-60 alkyl, C6-60 aryl, C3-60 heteroaryl, morpholino, thiomorpholino, 5- or 6-membered heterocycloalkyl, C3-60 cycloalkyl, tri(C1-60 alkylsilyl), di(C1-60 alkyl)C6-60arylsilyl, tri(C6-60 arylsilyl), adamantyl, C7-60 bicycloalkyl, C2-60 alkenyl, alkynyl, cyano, amino, mono- or di-C1-60 alkylamino, mono- or di-C6-60arylamino, C6-60ar(C1-60 alkyl), C1-60 alkyloxy, alkylthio, C6-60 aryloxy, arylthio, arylcarbonyl, C1-60 alkoxycarbonyl, alkylcarbonyl, carboxyl, nitro, hydroxyl or substituent] and organic electroluminescent devices and organic solar cells including the same. The organic electroluminescent compound provides superior luminous efficiency and excellent color purity of the material and life property. Therefore, it may be used to manufacture OLEDs having very good operation life.

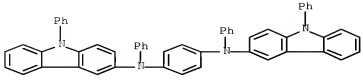
IT 873793-75-0 887403-00-1 887403-02-3
887403-08-9
RL: PRPH (Prophetic); TEM (Technical or engineered material use); USES (Uses)
(novel organic electroluminescent compds. and organic electroluminescent device using same)

RN 873793-75-0 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

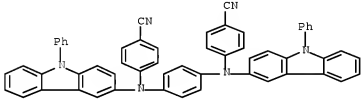


RN 887403-00-1 CAPLUS
CN 1,4-Benzenediamine, N1,N4-diphenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)-

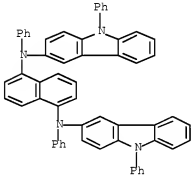
(CA INDEX NAME)



RN 887403-02-3 CAPLUS
CN Benzonitrile, 4,4'-[1,4-phenylenebis[(9-phenyl-9H-carbazol-3-yl)imino]]bis-
(CA INDEX NAME)



RN 887403-08-9 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-diphenyl-N1,N5-bis(9-phenyl-9H-carbazol-3-
yl)- (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 13 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2010:679917 CAPLUS Full-text
DOCUMENT NUMBER: 153:37163
TITLE: Preparation of nitrogen-containing heterocyclic compounds for organic electronic device
INVENTOR(S): Lee, Dong-Hoon; Park, Tae-Yoon; Bae, Jae-Soon; Nam,

Hyun; Jang, Jun-Gi; Hong, Sung-Kil
PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
SOURCE: PCT Int. Appl., 212pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2010062065	A2	20100603	WO 2009-KR6437	20091103
WO 2010062065	A3	20100826		
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
KR 2010062973	A	20100610	KR 2009-7023115	20091103
KR 1052973	B1	20110729		
EP 2311826	A2	20110420	EP 2009-829272	20091103
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, AL, BA, RS				
KR 2011042127	A	20110422	KR 2011-7007182	20091103
CN 102119158	A	20110706	CN 2009-80131071	20091103
US 20110127513	A1	20110602	US 2011-54047	20110113

PRIORITY APPLN. INFO.: KR 2008-108602 A 20081103
KR 2009-7023115 A3 20091103
WO 2009-KR6437 W 20091103
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 153:37163
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title heterocyclic compds. I [X1 = N, CR3; X2 = N, CR4; X3 = N, CR5; X4 = N, CR6; Y1 = N, CR7; Y2 = N, CR8; Y3 = N, CR9; Y4 = N, CR10 where X1 - X4 and Y1 - Y4 are not N at the same time, R3 - R10 = independently -(L)p-(Y)q where p = 0 - 10 integer, q = 1 - 10 integer, adjacent two and more among R3-R10 can form mono- or polycyclic rings.; L = O, S, (un)substituted N, P, arylenes, etc.; Y = H, D, NO2, etc.; R1, R2 = independently (un)substituted C3 - C40 cycloalkyl, C6-C60 aryl, C2-C40 alkenyl, etc. where R1 and R2 can form (un)substituted aliphatic, (hetero)aromatic mono- or polycyclic ring] were prepared For example, to a solution of 3-bromo-N-phenylcarbazole (3.22 g) and II (3.95 g) in THF (100 mL) were added 2M K2CO3 (20 mL) and Pd(PPh3)4 (2 mol%), and the mixture was refluxed for 5 h to afford III in 75% yield. An organoluminescence device comprising compound III displayed luminescent efficiency of 22.57 cd/A at 20 mA/cm2 and CIE coordinate of (0.354, 0.611). Compds. I are claimed useful for organic electronic elements such as organic

electroluminescent element, organic solar cell, organophotoconductor (OPC) drum, and organic transistor.

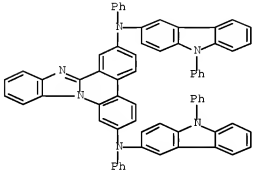
IT 1228266-06-5P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of nitrogen-containing heterocyclic compds. for organic electronic device)

RN 1228266-06-5 CAPLUS

CN Benzimidazo[1,2-f]phenanthridine-2,7-diamine, N2,N7-diphenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



L3 ANSWER 14 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER: 2010:474625 CAPLUS Full-text

DOCUMENT NUMBER: 152:453946

TITLE: Preparation of carbazole derivatives for organic electronic device

INVENTOR(S): Lee, Dae-Woong; Hong, Sung-Kil; Park, Tae-Yoon; Kim, Yeon-Hwan; Kim, Seong-So

PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea

SOURCE: PCT Int. Appl., 66pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2010041872	A2	20100415	WO 2009-KR5736	20091008
WO 2010041872	A3	20100722		

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,

ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

KR 2010039815 A 20100416 KR 2009-95542 20091008

EP 2343277 A2 20110713 EP 2009-819379 20091008

R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, AL, BA, RS

US 20110193074 A1 20110811 US 2011-123162 20110407

PRIORITY APPLN. INFO.: KR 2008-98493 A 20081008

WO 2009-KR5736 W 20091008

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 152:453946

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Disclose are compds. I [1, m, n = 0-5; Y1-Y3 = alkenylene (optionally substituted with halo, alkyl, alkenyl, etc.), arylene (optionally substituted with halo, alkyl, alkenyl, etc.), divalent heterocycle (optionally substituted with halo, alkyl, alkenyl, etc.), etc.; R1, R3, R4 = alkyl (optionally substituted with alkyl, alkenyl, alkoxy, etc.), alkoxy (optionally substituted with halo, alkyl, alkenyl, etc.), alkenyl (optionally substituted with halo, alkyl, alkenyl, etc.), etc.; R2 = alkyl (optionally substituted with alkyl, alkenyl, alkoxy, etc.), alkoxy (optionally substituted with halo, alkyl, alkenyl, etc.), aryl (optionally substituted with halo, alkyl, alkenyl, etc.), etc.; at least one of R3 and R4 contains Q1 moiety; R5-R7 = H, halo, alkyl (optionally substituted with halo, alkyl, alkenyl, etc.), etc.]. For example, II [Q = Q2] was prepared from carbazole via conversion into II [Q = Br] in 3-step process followed by Pd[P(t-Bu)3]2-catalyzed cross-coupling reaction with Q2-H. Electroluminescent device comprising II [Q = Q2] showed 26.63 cd/A with CIE coordinate of (0.316,0.652).

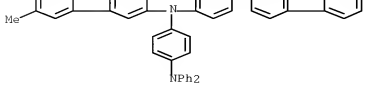
IT 1221237-14-4P 1221237-38-2P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

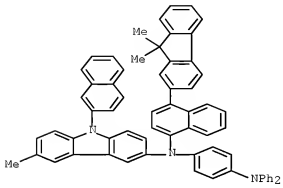
(preparation of carbazole derivs. as organic electroluminescent materials)

RN 1221237-14-4 CAPLUS

CN 1,4-Benzenediamine, N1-[4-(9,9-dimethyl-9H-fluoren-2-yl)phenyl]-N1-[6-methyl-9-(2-naphthalenyl)-9H-carbazol-3-yl]-N4,N4-diphenyl- (CA INDEX NAME)



RN 1221237-38-2 CAPLUS
CN 1,4-Benzenediamine, N1-[4-(9,9-dimethyl-9H-fluoren-2-yl)-1-naphthalenyl]-N1-[6-methyl-9-(2-naphthalenyl)-9H-carbazol-3-yl]-N4,N4-diphenyl- (CA INDEX NAME)

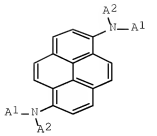


OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L3 ANSWER 15 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2010:270281 CAPLUS Full-text
DOCUMENT NUMBER: 152:346482
TITLE: Pyrene compounds and organic electroluminescent devices using the same
INVENTOR(S): Je, Jong-Tae; Lee, Se-Jin; Song, Bo-Kyoung; Lee, Sang-Hae; Park, Jin-Woo
PATENT ASSIGNEE(S): SFC Co., Ltd., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 64pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20100052526	A1	20100304	US 2009-545301	20090821
KR 2010024894	A	20100308	KR 2009-66815	20090722
JP 2010053131	A	20100311	JP 2009-194531	20090825
PRIORITY APPLN. INFO.:			KR 2008-83442 A	20080826
			KR 2009-66815 A	20090722

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): CASREACT 152:346482; MARPAT 152:346482
GI



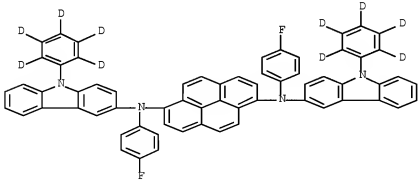
I

AB The title pyrene compds. are described by the general formula I (each A1 and A2 = independently selected C6-24 aryl or C2-24 heteroaryl groups which are unsubstituted or substituted with at least one substituent selected from (un)substituted C1-24 alkyl, (un)substituted C3-24 cycloalkyl, (un)substituted C1-24 alkoxy, cyano, halo, (un)substituted C6-24 aryl, (un)substituted C6-24 aryloxy, (un)substituted C2-24 heteroaryl, (un)substituted C6-40 arylamino, (un)substituted C2-40 alkylamino, germanium, boron, (un)substituted C1-24 alkylsilyl, (un)substituted C1-24 arylsilyl, and deuterium, with the restriction that the pyrene compound contains at least one deuterium atom and at least one halogen atom). Organic electroluminescent devices (e.g., for use in lighting deives or displays) incorporating the compds. in a layer between electrode layers, especially a light-emitting layer (e.g., as a blue light-emitting material), are also described.

IT 1214262-90-4
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(deuterated halogenated pyrene derivs. and organic electroluminescent devices using them)

RN 1214262-90-4 CAPLUS

CN 1,6-Pyrenediamine, N1,N6-bis(4-fluorophenyl)-N1,N6-bis[9-(phenyl-2,3,4,5,6-d5)-9H-carbazol-3-yl]- (CA INDEX NAME)



L3 ANSWER 16 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER: 2010:131225 CAPLUS Full-text

DOCUMENT NUMBER: 152:238764

TITLE: Preparation of fluorenyl-carbazole derivatives as organic electroluminescent materials

INVENTOR(S): Kim, Dae Seong; Choi, Dae Hyeok; Kim, Dong Ha; Hong, Cheol Gwang; Park, Yong Uk; Park, Jeong Cheol; Nam, Hyeon Guk; Hyun, Ae Ran; Kim, Gi Won; Baek, Jang Yeol; Yoo, Han Seong
PATENT ASSIGNEE(S): Duksan Hi-Metal Co., Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 27pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2010008947	A	20100127	KR 2008-69588	20080717
KR 1026175	B1	20110405		
PRIORITY APPLN. INFO.:			KR 2008-69588	20080717

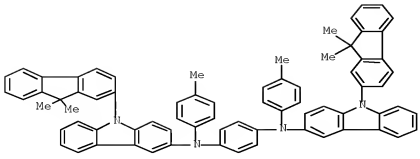
OTHER SOURCE(S): MARPAT 152:238764
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

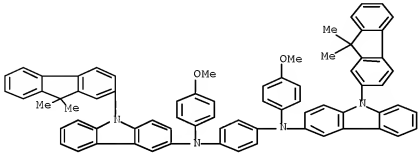
AB Title compds. I [X = (un)substituted aryl or polycyclic aromatic group; R1-R10 = H, halo, cyano, etc.; Ar = (un)substituted aryl, polycyclic aromatic group or heteroaryl] were prepared For example, bromination of 9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazole followed by Pd2(dba)3-catalyzed coupling reaction with N,N'-diphenylbenzidine afforded compound I [Ar = phenyl; all of R1-R4 = methyl; all of R5-R10 = H; X = Q1] (II). Electroluminescent device comprising ITO, II, NPB, BD-052X, ADN, Alq3, LiF, and Al showed 7.44 cd/A with CIE coordinate of (0.147,0.147).

IT 1207671-88-2P 1207671-89-3P 1207671-91-7P
1207671-92-8P 1207671-93-9P 1207671-94-0P
1207671-95-1P 1207671-97-3P 1207671-99-5P
1207672-00-1P 1207672-01-2P 1207672-03-4P
1207672-04-5P 1207672-05-6P 1207672-06-7P
1207672-08-9P 1207672-10-3P 1207672-12-5P
1207672-15-8P 1207672-16-9P 1207672-17-0P
1207672-18-1P 1207672-19-2P 1207672-20-5P
1207672-22-7P 1207672-23-8P 1207672-24-9P
1207672-25-0P 1207672-26-1P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(claimed compound; preparation of fluorenyl-carbazole derivs. as organic electroluminescent materials)

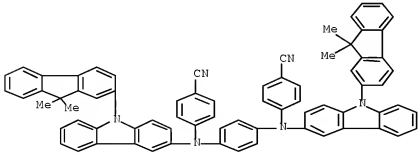
RN 1207671-88-2 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-bis(4-methylphenyl)- (CA INDEX NAME)



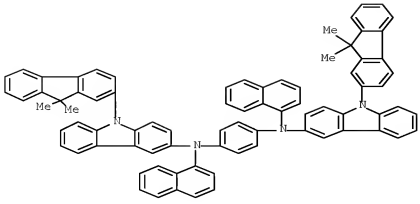
RN 1207671-89-3 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-bis(4-methoxyphenyl)- (CA INDEX NAME)



RN 1207671-91-7 CAPLUS
CN Benzonitrile, 4,4'-[1,4-phenylenebis[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]imino]]bis- (CA INDEX NAME)



RN 1207671-92-8 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-di-1-naphthalenyl- (CA INDEX NAME)



RN 1207671-93-9 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-di-2-naphthalenyl- (CA INDEX NAME)

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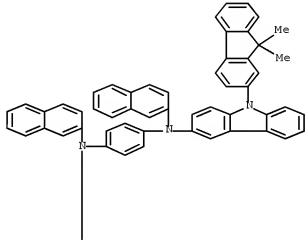

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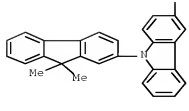
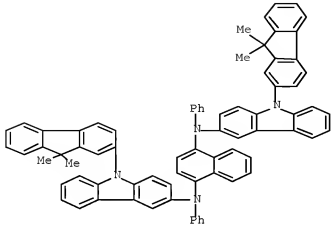
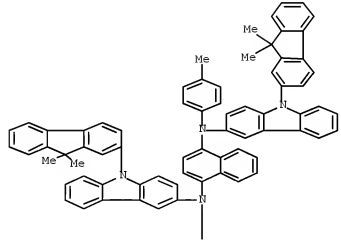


RN 1207671-94-0 CAPLUS

CN 1,4-Naphthalenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-diphenyl- (CA INDEX NAME)



RN 1207671-95-1 CAPLUS
CN 1,4-Naphthalenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-bis(4-methylphenyl)- (CA INDEX NAME)



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RN 1207671-97-3 CAPLUS
CN 1,4-Naphthalenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-bis(4-methoxyphenyl)- (CA INDEX NAME)

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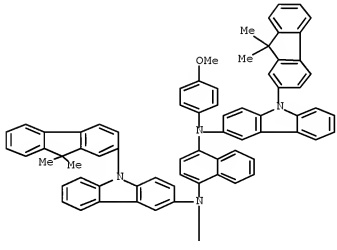

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RN 1207671-99-5 CAPLUS
CN Benzonitrile, 4,4'-[1,4-naphthalenediylbis[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]imino]]bis- (CA INDEX NAME)

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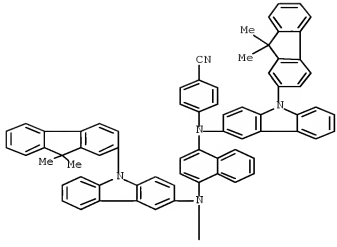

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RN 1207672-00-1 CAPLUS
CN 1,4-Naphthalenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-di-1-naphthalenyl- (CA INDEX NAME)

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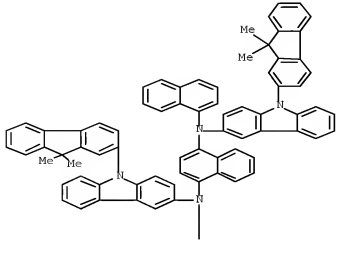

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RN 1207672-01-2 CAPLUS
CN 1,4-Naphthalenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-di-2-naphthalenyl- (CA INDEX NAME)

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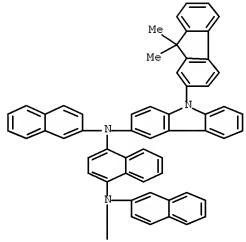

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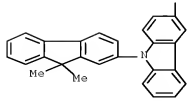

RN 1207672-03-4 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N5-diphenyl- (CA INDEX NAME)

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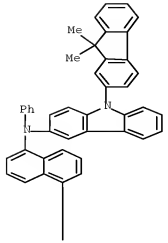

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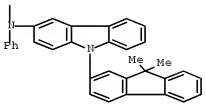

RN 1207672-04-5 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N5-bis(4-methylphenyl)- (CA INDEX NAME)

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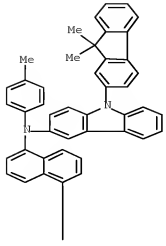

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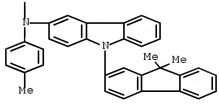

RN 1207672-05-6 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N5-bis(4-methoxyphenyl)- (CA INDEX NAME)

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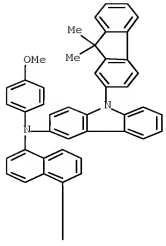

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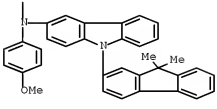

RN 1207672-06-7 CAPLUS
CN Benzonitrile, 4,4'-[1,5-naphthalenediylbis[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]imino]]bis- (CA INDEX NAME)

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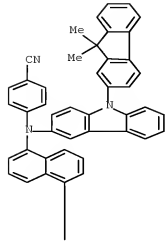

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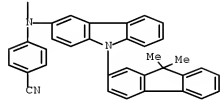

RN 1207672-08-9 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N5-di-1-naphthalenyl- (CA INDEX NAME)

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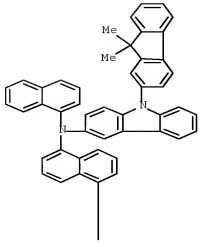

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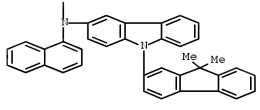

RN 1207672-10-3 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N5-di-2-naphthalenyl- (CA INDEX NAME)

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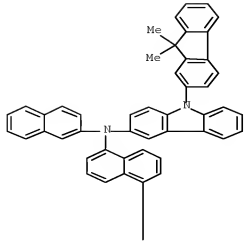

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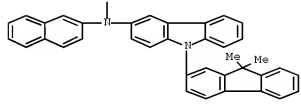
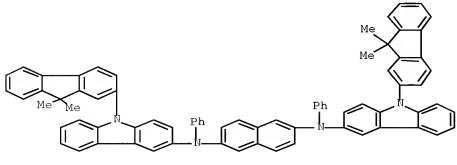
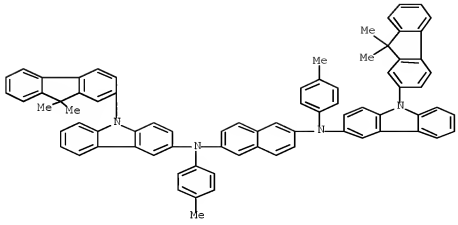


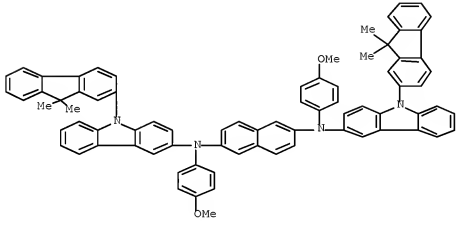
RN 1207672-12-5 CAPLUS
CN 2,6-Naphthalenediamine, N2,N6-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N2,N6-diphenyl- (CA INDEX NAME)



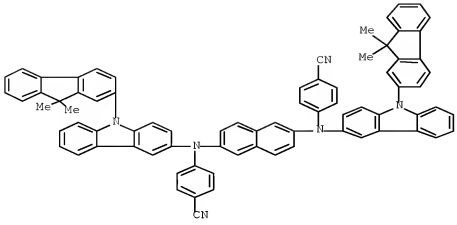
RN 1207672-15-8 CAPLUS
CN 2,6-Naphthalenediamine, N2,N6-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N2,N6-bis(4-methylphenyl)- (CA INDEX NAME)



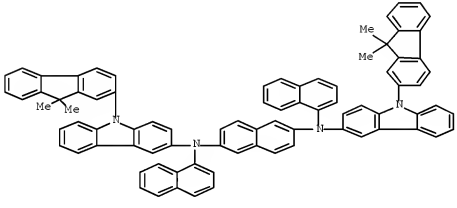
RN 1207672-16-9 CAPLUS
CN 2,6-Naphthalenediamine, N2,N6-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N2,N6-bis(4-methoxyphenyl)- (CA INDEX NAME)



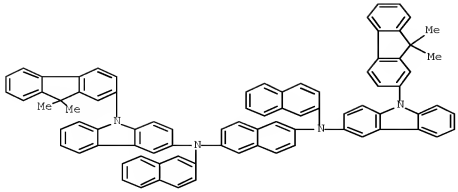
RN 1207672-17-0 CAPLUS
CN Benzonitrile, 4,4'-[2,6-naphthalenediylbis[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]imino]]bis- (CA INDEX NAME)



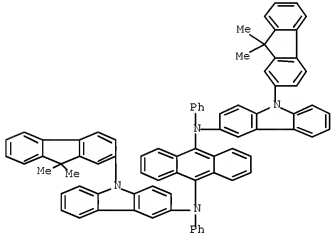
RN 1207672-18-1 CAPLUS
CN 2,6-Naphthalenediamine, N2,N6-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N2,N6-di-1-naphthalenyl- (CA INDEX NAME)



RN 1207672-19-2 CAPLUS
CN 2,6-Naphthalenediamine, N2,N6-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N2,N6-di-2-naphthalenyl- (CA INDEX NAME)



RN 1207672-20-5 CAPLUS
CN 9,10-Anthracenediamine, N9,N10-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N9,N10-diphenyl- (CA INDEX NAME)



RN 1207672-22-7 CAPLUS
CN 9,10-Anthracenediamine, N9,N10-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N9,N10-bis(4-methylphenyl)- (CA INDEX NAME)

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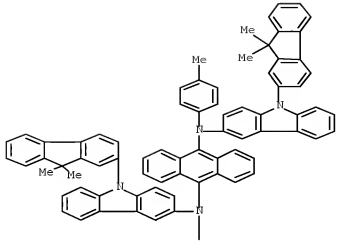

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RN 1207672-23-8 CAPLUS
CN 9,10-Anthracenediamine, N9,N10-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N9,N10-bis(4-methoxyphenyl)- (CA INDEX NAME)

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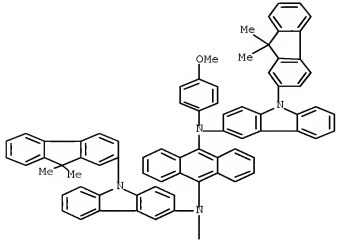
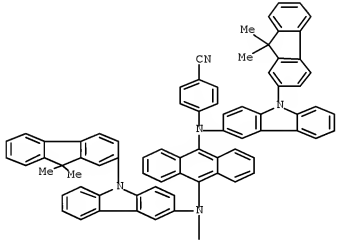


PAGE 2-A

RN 1207672-24-9 CAPLUS
CN Benzonitrile, 4,4'-[9,10-anthracenediylbis[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]imino]]bis- (CA INDEX NAME)

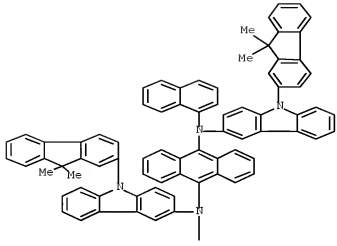
PAGE 1-A



PAGE 2-A

RN 1207672-25-0 CAPLUS
CN 9,10-Anthracenediamine, N9,N10-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N9,N10-di-1-naphthalenyl- (CA INDEX NAME)

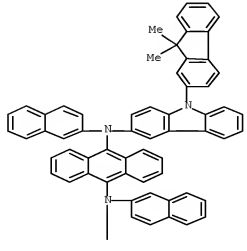
PAGE 1-A

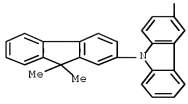


PAGE 2-A

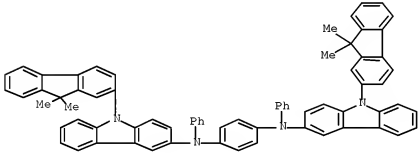
RN 1207672-26-1 CAPLUS
CN 9,10-Anthracenediamine, N9,N10-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N9,N10-di-2-naphthalenyl- (CA INDEX NAME)

PAGE 1-A





IT 1207671-87-1P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of fluorenyl-carbazole derivs. as organic electroluminescent materials)
RN 1207671-87-1 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-diphenyl- (CA INDEX NAME)



L3 ANSWER 17 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2010:83669 CAPLUS Full-text
DOCUMENT NUMBER: 152:250646
TITLE: Organic light-emitting indenofluorene-based compound for organic light-emitting device
INVENTOR(S): Kim, Bok Yeong; Park, No Gil; Ahn, Jung Bok; Jin, Seong Min; Lee, Jae Seong; Si, Sang Man; Han, Geun Hui; Lee, Jae Seon; Lee, Dae Gyun; Kang, Ji Seung; Ahn, Do Hwan; Oh, Min Yeong; Min, Byeong U; Yeo, Sang Wan; Park, Jae Yun; Baek, Do Hyeon; Ha, Min Su; Ahn, Jun Su
PATENT ASSIGNEE(S): Hana Fine Chem Co., Ltd., S. Korea; CSelsolar Co., Ltd.
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 102 pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

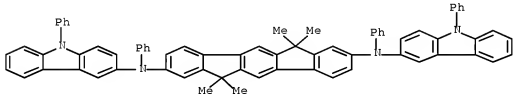
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2010006072	A	20100118	KR 2008-66243	20080708
KR 1027329	B1	20110411		

PRIORITY APPLN. INFO.: KR 2008-66243 20080708
OTHER SOURCE(S): MARPAT 152:250646

AB The title compound is expressed by chemical formula Ar7Ar8NAr1[Ar2]l[Ar3]m[N(R4)]nAr6, wherein (1) Ar1, Ar2, and Ar3 independently denote substituted or unsubstituted C6-C50 arylene group, or substituted or unsubstituted C2-C50heteroarylene group, (2) Ar4, Ar5, Ar6, and Ar7 independently denote substituted or unsubstituted C1-C5 alkyl, substituted or unsubstituted C6-C50 aryl, or substituted or unsubstituted C2-C50 heteroaryl, (3) l, m, and n independently denote 0 or 1, and (4) when m = 0 and n = 1, Ar1 and Ar2 denote phenylene group, Ar4 and Ar7 denote Ph, and Ar5 and Ar6 denote Me, methylphenyl group or -C6H4-N(C6H5)2. Organic light-emitting devices with excellent luminescence and brightness can be obtained from the compound

IT 1207595-32-1P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic light-emitting indenofluorene-based compound for hole injection/transport for organic light-emitting device)

RN 1207595-32-1 CAPLUS
CN Indeno[1,2-b]fluorene-2,8-diamine, 6,12-dihydro-6,6,12,12-tetramethyl-N2,N8-diphenyl-N2,N8-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



L3 ANSWER 18 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2009:1589053 CAPLUS Full-text
DOCUMENT NUMBER: 152:119415
TITLE: Preparation of carbazole derivatives as organic electroluminescent materials
INVENTOR(S): Choi, Dae Hyeok; Kim, Dong Ha; Hong, Cheol Gwang; Kim, Dae Seong; Park, Jeong Cheol; Kim, Gi Won; Hyun, Ae Ran; Baek, Jang Yeol; Park, Yong Uk; Yoo, Han Seong
PATENT ASSIGNEE(S): Duksan Hi-Metal Co., Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 24pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

KR 2009129799	A	20091217	KR 2008-55897	20080613
KR 1026173	B1	20110405		

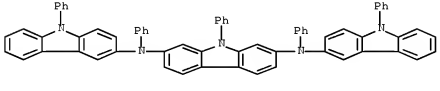
PRIORITY APPLN. INFO.: KR 2008-55897 20080613
OTHER SOURCE(S): MARPAT 152:119415
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

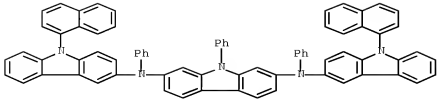
AB Title compds. I [Ar1, Ar2 = aryl (wherein aryl may be substituted with alkyl optionally containing heteroatom selected from S, N, O, etc.) or heteroaryl (containing heteroatom selected from S, N, O, etc.); R1-R9 = H, alkyl, aryl, etc. (wherein alkyl and aryl are optionally substituted with halo, cyano, hydroxy, etc.)] or II [Ar3 = aryl (wherein aryl may be substituted with alkyl optionally containing heteroatom selected from S, N, O, etc.) or heteroaryl (containing heteroatom selected from S, N, O, etc.); R10-R17 = H, alkyl, aryl, etc. (wherein alkyl and aryl are optionally substituted with halo, cyano, hydroxy, etc.)] were prepared For example, Pd(PPh3)4-catalyzed coupling reaction of 2,7-dibromo-9-phenyl-9H-carbazole with phenyl-(9-phenyl-carbazol-3-yl)-amine afforded compound III. Electroluminescent device comprising ITO, III, C-545T, Alq3, LiF, and Al showed 26.84 cd/A and CIE coordinate of (0.281,0.649).

IT 1202685-37-7P 1202685-38-8P 1202685-39-9P
1202685-40-2P 1202685-41-3P 1202685-42-4P
1202685-43-5P 1202685-44-6P 1202685-45-7P
1202685-46-8P 1202685-47-9P 1202685-48-0P
1202685-49-1P 1202685-50-4P 1202685-51-5P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of carbazole derivs. as organic electroluminescent materials)

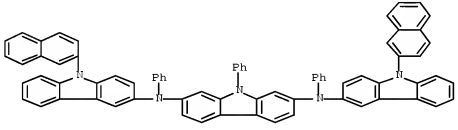
RN 1202685-37-7 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7,9-triphenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



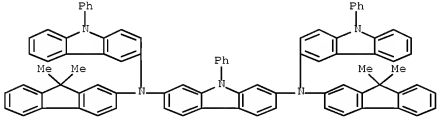
RN 1202685-38-8 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-bis[9-(1-naphthalenyl)-9H-carbazol-3-yl]-N2,N7,9-triphenyl- (CA INDEX NAME)



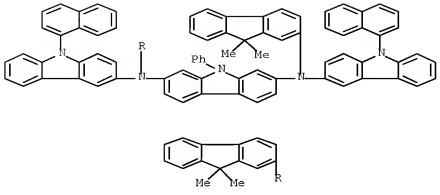
RN 1202685-39-9 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-bis[9-(2-naphthalenyl)-9H-carbazol-3-yl]-N2,N7,9-triphenyl- (CA INDEX NAME)



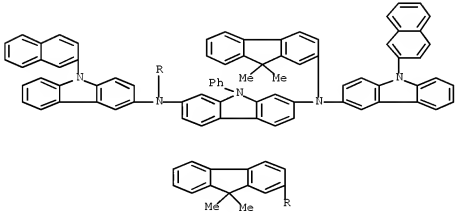
RN 1202685-40-2 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-bis(9,9-dimethyl-9H-fluoren-2-yl)-9-phenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



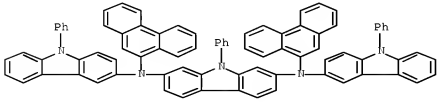
RN 1202685-41-3 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-bis(9,9-dimethyl-9H-fluoren-2-yl)-N2,N7-bis[9-(1-naphthalenyl)-9H-carbazol-3-yl]-9-phenyl- (CA INDEX NAME)



RN 1202685-42-4 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-bis(9,9-dimethyl-9H-fluoren-2-yl)-N2,N7-bis[9-(2-naphthalenyl)-9H-carbazol-3-yl]-9-phenyl- (CA INDEX NAME)

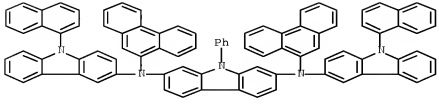


RN 1202685-43-5 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-di-9-phenanthrenyl-9-phenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

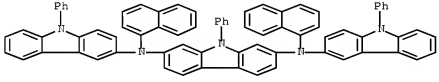


RN 1202685-44-6 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-bis[9-(1-naphthalenyl)-9H-carbazol-3-yl]-

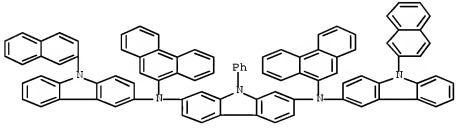
N2,N7-di-9-phenanthrenyl-9-phenyl- (CA INDEX NAME)



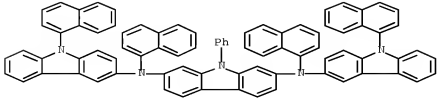
RN 1202685-45-7 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-di-1-naphthalenyl-9-phenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



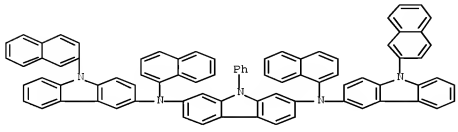
RN 1202685-46-8 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-bis[9-(2-naphthalenyl)-9H-carbazol-3-yl]-N2,N7-di-9-phenanthrenyl-9-phenyl- (CA INDEX NAME)



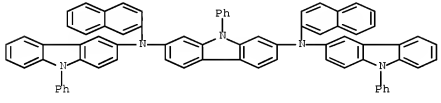
RN 1202685-47-9 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-di-1-naphthalenyl-N2,N7-bis[9-(1-naphthalenyl)-9H-carbazol-3-yl]-9-phenyl- (CA INDEX NAME)



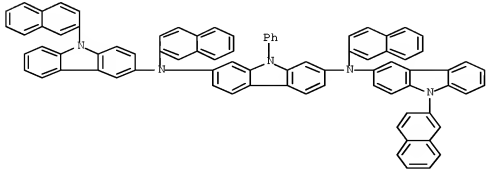
RN 1202685-48-0 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-di-1-naphthalenyl-N2,N7-bis[9-(2-naphthalenyl)-9H-carbazol-3-yl]-9-phenyl- (CA INDEX NAME)



RN 1202685-49-1 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-di-2-naphthalenyl-9-phenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

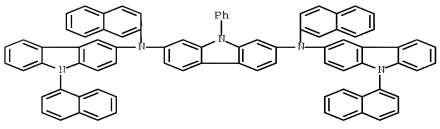


RN 1202685-50-4 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-di-2-naphthalenyl-N2,N7-bis[9-(2-naphthalenyl)-9H-carbazol-3-yl]-9-phenyl- (CA INDEX NAME)



RN 1202685-51-5 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-di-2-naphthalenyl-N2,N7-bis[9-(1-

naphthalenyl)-9H-carbazol-3-yl]-9-phenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L3 ANSWER 19 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2009:1160371 CAPLUS Full-text
DOCUMENT NUMBER: 151:392224
TITLE: Novel organic electroluminescent compounds and organic electroluminescent device using the same
INVENTOR(S): Lee, Soo Young; Cho, Young Jun; Kwon, Hyuck Joo; Kim, Bong Ok; Kim, Sung Min; Yoon, Seung Soo
PATENT ASSIGNEE(S): Gracel Display Inc., S. Korea
SOURCE: Eur. Pat. Appl., 70pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 2103666	A2	20090923	EP 2009-154941	20090311
EP 2103666	A3	20100414		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, RS				
KR 2009100530	A	20090924	KR 2008-25768	20080320
KR 989815	B1	20101029		
JP 2009228004	A	20091008	JP 2009-55896	20090310
CN 101550085	A	20091007	CN 2009-10129663	20090319
US 20090273777	A1	20091105	US 2009-383022	20090319

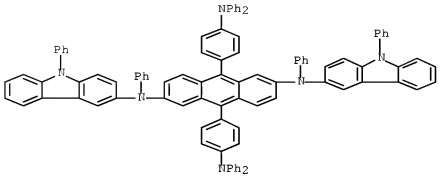
PRIORITY APPLN. INFO.: KR 2008-25768 A 20080320
OTHER SOURCE(S): CASREACT 151:392224; MARPAT 151:392224

AB Electroluminescent compds. are described which comprise anthracene derivs. substituted at the 9 and 10 positions, and ≥1 other position, by substituents described by the general formulas -N(-Ar1-R1)(-Ar2-R2) and -A-N(-Ar1-R1)(-Ar2-R2) (A = optionally substituted C6-60 arylene or optionally substituted C5-60 heteroarylene; Ar1-2 = independently selected optionally substituted C6-60 arylene or optionally substituted C4-60 heteroarylene; and R1-2 = independently selected H, D, halo, C1-60 (halo)alkyl, 5- or 6-membered heterocycloalkyl, C6-60 aryl, etc.). Organic electroluminescent devices, including white light-emitting devices, employing the derivs. in an organic layer between electrods are also described.

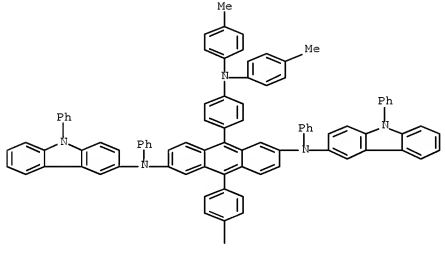
IT 1187828-05-6 1187838-34-1
RL: MOA (Modifier or additive use); PRPH (Prophetic); TEM (Technical or

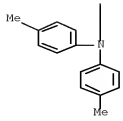
engineered material use); USES (Uses)
(electroluminescent anthracene derivs. and organic electroluminescent devices using them)

RN 1187838-05-6 CAPLUS
CN INDEX NAME NOT YET ASSIGNED



RN 1187838-34-1 CAPLUS
CN INDEX NAME NOT YET ASSIGNED



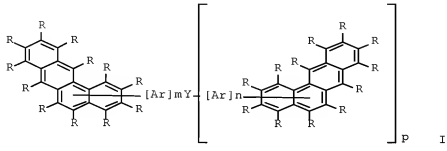


OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

L3 ANSWER 20 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2008:1451132 CAPLUS Full-text
DOCUMENT NUMBER: 150:25892
TITLE: Benz[a]anthracene derivatives and their preparation and organic electronic devices using them
INVENTOR(S): Stoessel, Philipp; Buesing, Arne; Heil, Holger
PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany
SOURCE: PCT Int. Appl., 129pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008145239	A2	20081204	WO 2008-EP3474	20080429
WO 2008145239	A3	20090416		
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
DE 102007024850	A1	20081204	DE 2007-102007024850	20070529
EP 2148909	A2	20100203	EP 2008-749228	20080429
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, MK, RS				
JP 2010528070	T	20100819	JP 2010-509698	20080429
KR 2009020542	A	20090226	KR 2008-7021666	20080904
KR 923037	B1	20091022		
US 20100187505	A1	20100729	US 2009-602039	20091125
CN 101679855	A	20100324	CN 2008-80017973	20091130
IN 2009KN04507	A	20100423	IN 2009-KN4507	20091229
PRIORITY APPLN. INFO.:			DE 2007-102007024850A	20070529
			WO 2008-EP3474 W	20080429

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 150:25892
GI



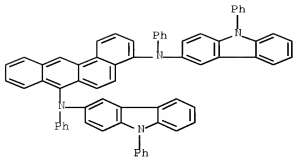
I

AB The title benz[a]anthracene derivs. are described by the general formula I (Ar = independently selected optionally substituted bivalent C5-40 (hetero)aromatic ring systems; Y = independently selected mono-, bi-, tri-, tetra-, penta-, or hexavalent C5-40 (hetero)aromatic ring systems, and, for different values of p, other substituents such as amines, ketones, single bonds, etc.; R = independently selected selected substituents including H, D, halo, CHO, arylamines, etc.; m, n = at each occurrence 0 or 1; p = 0-5; and the Ar or Y groups are attached at one of the 2, 3,4, 5, or 6 positions on the benz[a]anthracene). Polymers, oligomers, and dendrimers are also described which have repeating units based on the compds. A method for preparing the derivs. in which the Ar or Y is in the 6-position is described which entails reaction of an optionally substituted 2-(2'-arylacetylene)phenylnaphthalene with an electrophile. Methods for producing the compds. are also described which entail carrying out coupling reactions, especially Pd-catalyzed Suzuki or Hartwig-Buchwald coupling reactions. Electronic devices (e.g., organic electroluminescent devices, organic FETs, organic integrated circuits, organic thin-film transistors, organic integrated circuits, organic solar cells, organic field quenching devices, organic light-emitting transistors, light-emitting electrochem. cells, organic photoreceptors, and organic laser diodes) using the materials or the polymers, oligomers, dendrimers, or mixts. containing them are also described.

IT 1087380-42-4P
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(benzanthracene derivs. and their preparation and organic electronic devices using them)

RN 1087380-42-4 CAPLUS

CN Benz[a]anthracene-4,7-diamine, N4,N7-diphenyl-N4,N7-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

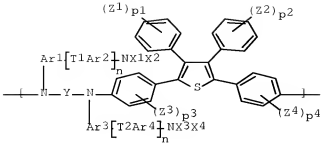
L3 ANSWER 21 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2008:1282001 CAPLUS Full-text
DOCUMENT NUMBER: 149:494318
TITLE: Sulfonated polymeric compound, its intermediate, and organic electroluminescent device containing the compound
INVENTOR(S): Sekiguchi, Michiru; Togashi, Kazuhiko
PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan
SOURCE: PCT Int. Appl., 165pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008126393	A1	20081023	WO 2008-JP861	20080403

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: JP 2007-98103 A 20070404
GI



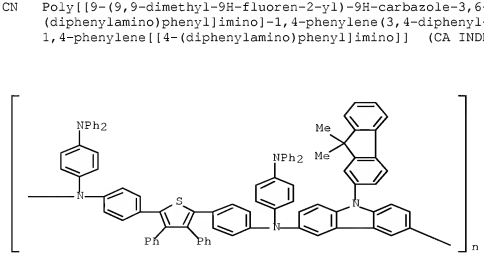
I

AB A sulfonated polymeric compound, and its intermediate, which sulfonated polymeric compound is characterized by having the structure resulting from introduction of a sulfo group in a polymeric compound having, in its polymer chain, ≥1 of the repeating units (I) (wherein each of Z1 to Z4 is a substituent; each of p1 and p2 is an integer of 0 to 5; each of p3 and p4 is an integer of 0 to 4; each of X1 to X4 is a monovalent aromatic group, provided that X1 and X2, and X3 and X4, may be bonded with each other to thereby form a ring; Y is a bivalent aromatic group; each of Ar1 to Ar4 independently is a bivalent aromatic group, provided that the bivalent aromatic group may be an aromatic group resulting from bonding of aromatic groups to each other leading to cyclization; each of T1 and T2 independently is a single bond or a group selected from the group consisting of -(CH2)t-, -CH=CH-, -C≡C-, -O-, -S-, -CQ1Q2-, -CO-, -SO-, -SO2- and -SiE2-; t is an integer of 1 to 20; each of Q1 and Q2 is an alkyl or an aromatic group, provided that these may be bonded with each other to thereby form a ring; E is a hydrogen atom, an alkyl or an aromatic group; and each of m and n is an integer of 0 to 2).

IT 1072155-70-4DP, sulfonated compound
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of solvent-soluble sulfonated polymeric compds. and their intermediates useful for organic electroluminescent devices)

RN 1072155-70-4 CAPLUS

CN Poly[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazole-3,6-diyl][[4-(diphenylamino)phenyl]imino]-1,4-phenylene(3,4-diphenyl-2,5-thiophenediyl)-1,4-phenylene[[4-(diphenylamino)phenyl]imino]] (CA INDEX NAME)

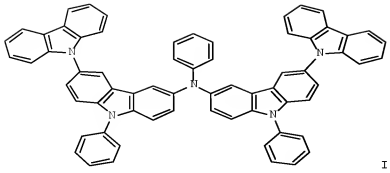


RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manuf. of solvent-sol. sulfonated polymeric compds. and their intermediates useful for org. electroluminescent devices
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 22 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2008:608032 CAPLUS Full-text
DOCUMENT NUMBER: 148:572612
TITLE: Novel carbazole derivative and use thereof
INVENTOR(S): Nakayama, Masami; Tsubaki, Tomoyuki
PATENT ASSIGNEE(S): Bando Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 88pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008059943	A1	20080522	WO 2007-JP72246	20071109
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW			
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
JP 2008127290	A	20080605	JP 2006-310825	20061116
KR 2009089332	A	20090821	KR 2009-7010337	20071109
EP 2100880	A1	20090916	EP 2007-831976	20071109
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR				
US 20100145067	A1	20100610	US 2009-515219	20090729

PRIORITY APPLN. INFO.: JP 2006-310825 A 20061116
WO 2007-JP72246 W 20071109
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): CASREACT 148:572612; MARPAT 148:572612
GI



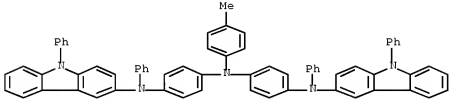
I

AB The carbazole derivative, having ≥2 carbazole structures in the mol., for example, I, is prepared The carbazole derivative can form a stable amorphous film by itself at a temperature equal to or higher than ambient temperature, has a high glass transition temperature, and can be suitably used as an organic electronic functional material, such as an electroluminescent material element.

IT 1026033-63-5P 1026033-68-0P 1026033-78-2P
1026033-79-3P 1026033-84-0P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of heat-resistant carbazole derivs. for electroluminescent materials)

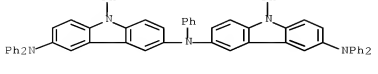
RN 1026033-63-5 CAPLUS

CN 1,4-Benzenediamine, N1-(4-methylphenyl)-N4-phenyl-N4-(9-phenyl-9H-carbazol-3-yl)-N1-[4-[phenyl(9-phenyl-9H-carbazol-3-yl)amino]phenyl]- (CA INDEX NAME)

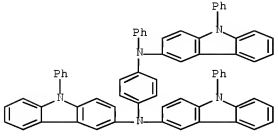


RN 1026033-68-0 CAPLUS

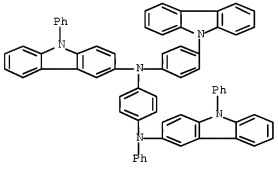
CN 9H-Carbazole-3,6-diamine, N3-[6-(diphenylamino)-9-phenyl-9H-carbazol-3-yl]-N3,N6,N6,9-tetraphenyl- (CA INDEX NAME)



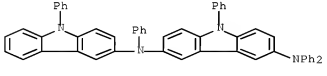
RN 1026033-78-2 CAPLUS
CN 1,4-Benzenediamine, N1-phenyl-N1,N4,N4-tris(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 1026033-79-3 CAPLUS
CN 1,4-Benzenediamine, N1-[4-(9H-carbazol-9-yl)phenyl]-N4-phenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 1026033-84-0 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N3,N6,9-tetraphenyl-N6-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

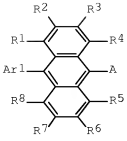
REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 23 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2008:411894 CAPLUS Full-text
DOCUMENT NUMBER: 148:437505
TITLE: Anthracene derivative, and light emitting element, light emitting device, and electronic device using the anthracene derivative
INVENTOR(S): Egawa, Masakazu; Osaka, Harue; Kawakami, Sachiko; Shitagaki, Satoko
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: PCT Int. Appl., 209pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

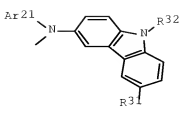
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008038607	A1	20080403	WO 2007-JP68480	20070914
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 2066629	A1	20090610	EP 2007-828313	20070914
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, RS				
KR 2009085584	A	20090807	KR 2009-7008595	20070914
US 20080086012	A1	20080410	US 2007-860146	20070924
US 7880019	B2	20110201		
JP 2008106063	A	20080508	JP 2007-255013	20070928
US 20110121275	A1	20110526	US 2011-14887	20110127

PRIORITY APPLN. INFO.:			
JP 2006-266002	A	20060928	
WO 2007-JP68480	W	20070914	
US 2007-860146	A1	20070924	

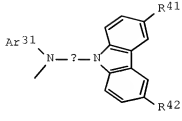
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 148:437505
GI



I



II



III

AB It is an object to provide a noble anthracene derivative, a light emitting element with a high luminous efficiency, and further a light emitting element with a long lifetime. It is another object to provide a light emitting device and electronic device with a long lifetime by using the light emitting element. An anthracene derivative represented by I (Ar1 = C6-25-aryl; R1-8 = H, C1-4-alkyl; A = II, III; Ar21 = C2-25-aryl; R31 = H, C1-4-alkyl, C6-25-aryl; R32 = C1-4-alkyl, C6-25-aryl; Ar31 = C6-25-aryl; β = C6-25-arylene; R41, R42 = H, C1-4-alkyl, C6-25-aryl) is provided. Since the above anthracene derivative has a high luminous efficiency, when the anthracene derivative is used for a light emitting element, the light emitting element can have a high luminous efficiency. Further, when the above anthracene derivative is used for a light emitting element, the light emitting element can have a long lifetime.

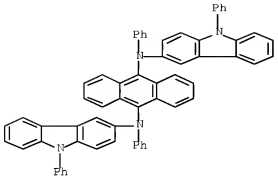
IT 1016896-10-8P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(preparation of anthracene derivative; anthracene derivative having high luminous efficiency, and light emitting element, light emitting device, and electronic device using the anthracene derivative)

RN 1016896-10-8 CAPLUS

CN 9,10-Anthracenediamine, N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 24 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2008:91000 CAPLUS Full-text
DOCUMENT NUMBER: 148:178962
TITLE: Carbazole-containing amine compound and use thereof
INVENTOR(S): Yagi, Tadao; Tanaka, Hiroaki; Oryu, Yoshitake; Toba, Yasumasa; Suda, Yasumasa; Tamano, Michiko
PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan
SOURCE: PCT Int. Appl., 174pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008010377	A1	20080124	WO 2007-JP62348	20070619
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2008044923	A	20080228	JP 2006-250332	20060915
PRIORITY APPLN. INFO.:			JP 2006-199927 A	20060721
			JP 2006-250332 A	20060915
			JP 2005-294504 A	20051007

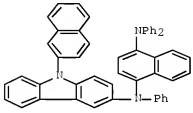
OTHER SOURCE(S): MARPAT 148:178962

AB Disclosed is a carbazole-containing amine compound which has a high Tg value and is hardly crystallized and therefore probably forms a stable thin film, and which can show excellent properties such as an ability of being operated at a low voltage and long service life when used as a material for an organic EL element.

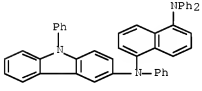
IT 1002763-08-7P 1002763-12-3P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(hight Tg carbazole-containing amine compound used as charge transport material in electroluminescent device)

RN 1002763-08-7 CAPLUS
CN 1,4-Naphthalenediamine, N1-[9-(2-naphthalenyl)-9H-carbazol-3-yl]-N1,N4,N4-triphenyl- (CA INDEX NAME)



RN 1002763-12-3 CAPLUS
CN 1,5-Naphthalenediamine, N1,N1,N5-triphenyl-N5-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



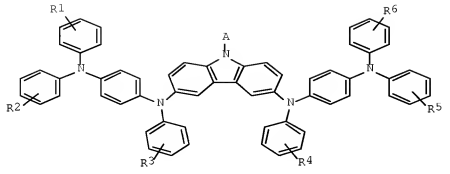
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 25 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2007:1237378 CAPLUS Full-text
DOCUMENT NUMBER: 147:494224
TITLE: Carbazole derivatives, their uses, and organic electroluminescent devices using them
INVENTOR(S): Nakayama, Masami; Kato, Hideyuki
PATENT ASSIGNEE(S): Bando Chemical Industries, Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 16pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007284411	A	20071101	JP 2006-116940	20060420
PRIORITY APPLN. INFO.:			JP 2006-116940	20060420

OTHER SOURCE(S): MARPAT 147:494224

GI



I

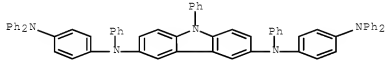
AB Title derivs. I [A = H, halo, C1-20 alkyl, C1-20 alkoxy, (un)substituted aryl, (un)substituted heterocyclyl; R1-R6 = H, C1-20 alkyl, C1-20 alkoxy, di(C1-20 alkyl)amino, (un)substituted aryl, (un)substituted heterocyclyl] are used as hole injecting agents and/or hole transport agents. Also claimed are organic electroluminescent devices having a hole injection layer and/or hole transport layer containing above agents.

IT 884510-65-0P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of bis[phenyl(diphenylaminophenyl)amino]carbazoles and organic electroluminescent devices having hole injection layer and/or hole transport layer containing them)

RN 884510-65-0 CAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6,9-triphenyl- (CA INDEX NAME)



L3 ANSWER 26 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER:	2007:1118739 CAPLUS Full-text
DOCUMENT NUMBER:	147:436460
TITLE:	Organic light emitting device and flat panel display device comprising the same
INVENTOR(S):	Hwang, Seok--Hwan; Kim, Young-Kook; Kwak, Yoon-Hyun; Lee, Jong-Hyuk; Lee, Kwan-Hee; Chun, Min-Seung
PATENT ASSIGNEE(S):	Samsung SDI Co., Ltd., S. Korea
SOURCE:	U.S. Pat. Appl. Publ., 49 pp., Cont.-in-part of U.S. Ser. No. 286,421. CODEN: USXXCO
DOCUMENT TYPE:	Patent
LANGUAGE:	English
FAMILY ACC. NUM. COUNT:	5

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070231503	A1	20071004	US 2007-806039	20070529
KR 2005097670	A	20051010	KR 2004-22877	20040402
KR 2006005755	A	20060118	KR 2004-54700	20040714
KR 2006059613	A	20060602	KR 2004-98747	20041129
KR 787425	B1	20071226		
US 20050221124	A1	20051006	US 2005-97182	20050404
US 7737627	B2	20100615		
US 20060020136	A1	20060126	US 2005-181706	20050713
US 7431997	B2	20081007		
US 20060115680	A1	20060601	US 2005-286421	20051125
KR 2007114562	A	20071204	KR 2006-48306	20060529
KR 846586	B1	20080716		
JP 2007318101	A	20071206	JP 2007-110746	20070419
CN 101083308	A	20071205	CN 2007-10109285	20070529
EP 1862524	A1	20071205	EP 2007-109066	20070529
EP 1862524	B1	20090408		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
ES 2323389	T3	20090714	ES 2007-109066	20070529
KR 2007114669	A	20071204	KR 2007-76436	20070730
KR 846608	B1	20080716		
JP 2010222355	A	20101007	JP 2010-68464	20100324
JP 2011023744	A	20110203	JP 2010-224249	20101001

PRIORITY APPLN. INFO.:

KR 2004-22877	A	20040402
KR 2004-54700	A	20040714
KR 2004-98747	A	20041129
US 2005-97182	A2	20050404
US 2005-181706	A2	20050713
US 2005-286421	A2	20051125
KR 2006-48306	A	20060529
JP 2005-342448	A3	20051128
JP 2007-110746	A3	20070419

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

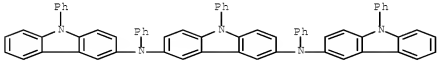
OTHER SOURCE(S): MARPAT 147:436460

GI

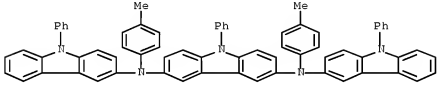
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB An organic light emitting device is described comprising a substrate; a first and a second electrode; one of the electrodes being a reflective electrode, the other being a (semi)transparent; and an organic layer interposed between the electrodes, the organic layer comprising an emission layer, and comprising a compound represented by general formula I, II, and III, where X = C1-C30 alkylene or alkenylene, C6-C30 arylene, C2-C30 heteroarylene, C2-C30 hetero ring; R1-R8 = (each independently) H, C1-C30 alkyl, C1-C30 alkoxy, C6-C30 aryl, C6-C30 aryloxy, C2-C30 hetero ring, C5-C30 polycyclic condensed ring, hydroxy, cyano, amino (R1, R2, R3 may bound together to form ring, R4, R5 may bound together to form a ring, two or more of R6,R7, R8 may bound together to form carbon ring); Ar1, Ar2, Ar3 = (each independently) C6-C30 aryl, C2-C30 heteroaryl; Y = (independently) C1-C30 alkyl, C6-C30 aryl, C2-C30 hetero ring; n (independently) = integer of 0-5. A flat panel display device comprising the organic light emitting device is also described.

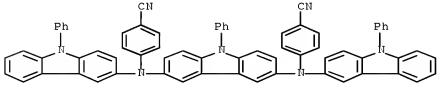
IT 873793-75-0P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic light emitting device using novel organic materials and flat panel display device comprising the same)
RN 873793-75-0 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



IT 873793-77-2 873793-78-3 873793-79-4
887403-00-1 887403-01-2 887403-02-3
887403-03-4 887403-08-9 887403-09-0
887403-10-3 887403-11-4 887403-12-5
951407-58-2 951407-59-3 951407-60-6
951407-69-5 951407-70-8 951407-71-9
951407-72-0 951407-79-7
RL: TEM (Technical or engineered material use); USES (Uses)
(organic light emitting device using novel organic materials and flat panel display device comprising the same)
RN 873793-77-2 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-methylphenyl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

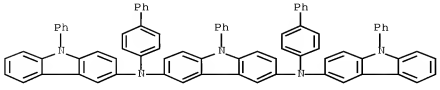


RN 873793-78-3 CAPLUS
CN Benzonitrile, 4,4'-[(9-phenyl-9H-carbazole-3,6-diyl)bis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)

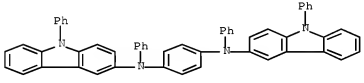


RN 873793-79-4 CAPLUS

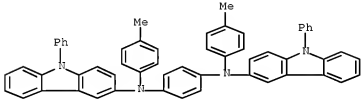
CN 9H-Carbazole-3,6-diamine, N3,N6-bis([1,1'-biphenyl]-4-yl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



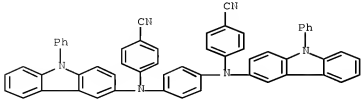
RN 887403-00-1 CAPLUS
CN 1,4-Benzenediamine, N1,N4-diphenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



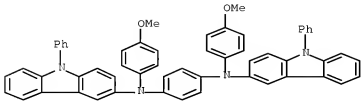
RN 887403-01-2 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis(4-methylphenyl)-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



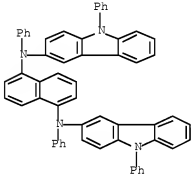
RN 887403-02-3 CAPLUS
CN Benzonitrile, 4,4'-[1,4-phenylenebis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



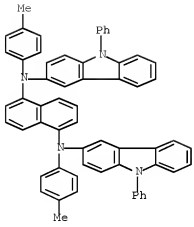
RN 887403-03-4 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis(4-methoxyphenyl)-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



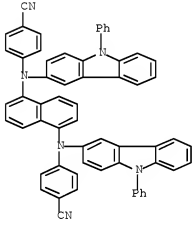
RN 887403-08-9 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-diphenyl-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



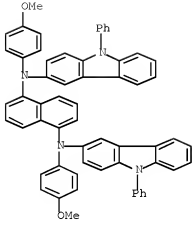
RN 887403-09-0 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis(4-methylphenyl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



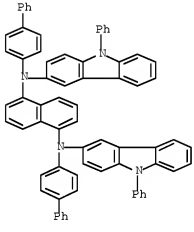
RN 887403-10-3 CAPLUS
CN Benzonitrile, 4,4'-[1,5-naphthalenediylbis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



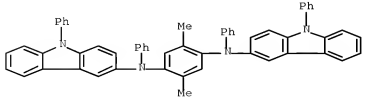
RN 887403-11-4 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis(4-methoxyphenyl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 887403-12-5 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis([1,1'-biphenyl]-4-yl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

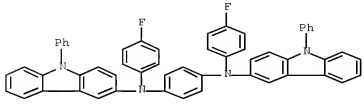


RN 951407-58-2 CAPLUS
CN 1,4-Benzenediamine, 2,5-dimethyl-N1,N4-diphenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

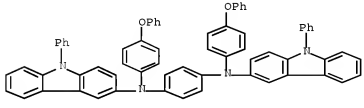


RN 951407-59-3 CAPLUS

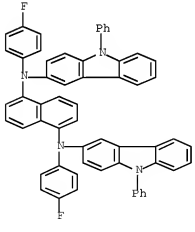
CN 1,4-Benzenediamine, N1,N4-bis(4-fluorophenyl)-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



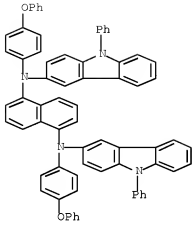
RN 951407-60-6 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis(4-phenoxyphenyl)-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



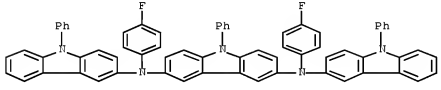
RN 951407-69-5 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis(4-fluorophenyl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



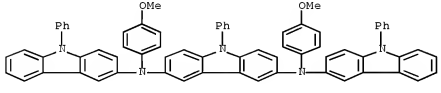
RN 951407-70-8 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis(4-phenoxyphenyl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



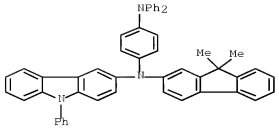
RN 951407-71-9 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-fluorophenyl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 951407-72-0 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-methoxyphenyl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 951407-79-7 CAPLUS
CN 1,4-Benzenediamine, N1-(9,9-dimethyl-9H-fluoren-2-yl)-N4,N4-diphenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

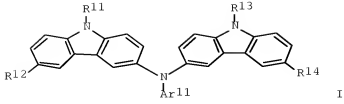


OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (20 CITINGS)

L3 ANSWER 27 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2007:845859 CAPLUS Full-text
DOCUMENT NUMBER: 147:248380
TITLE: Organic field effect transistor with composite layer source and drain electrodes containing a carbazole derivative
INVENTOR(S): Furukawa, Shinobu; Imahayashi, Ryota; Kato, Kaoru
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: PCT Int. Appl., 170pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007086534	A1	20070802	WO 2007-JP51323	20070122
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2007227907	A	20070906	JP 2007-15372	20070125
US 20080099757	A1	20080501	US 2007-657718	20070125
KR 2008100205	A	20081114	KR 2008-7020639	20080822
PRIORITY APPLN. INFO.:			JP 2006-17431 A	20060126
			WO 2007-JP51323 W	20070122

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 147:248380
GI



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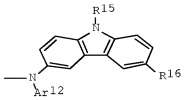


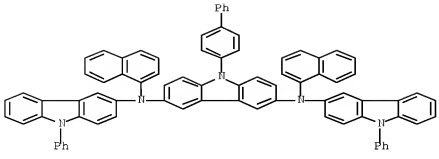
II

AB It is an object to provide an organic field effect transistor including an electrode which can reduce an energy barrier at an interface between a conductive layer and a semiconductor layer, and a semiconductor device including the organic field effect transistor. A composite layer containing an organic compound and an inorg. compound is provided in at least part of 1 of a source electrode and a drain electrode in an organic field effect transistor, and as the organic compound, a carbazole derivative of the general formula I is used. In the general formula, each of R11 and R13 represents H, a C1–C6 alkyl group, a C6–C25 aryl group, a C5–C9 heteroaryl group, an arylalkyl group, or a C1–C7 acyl group; Ar11 represents a C6–C25 aryl group or C5–C9 heteroaryl group; R12 represents H, a C1–C6 alkyl group, or a C6–C12 aryl group; R14 represents H, a C1–C6 alkyl group, a C6–C12 aryl group, or a substituent represented by a general formula II. In the second general formula, R15 represents H, a C1–C6 alkyl group, a C6–C25 aryl group, a C5–C9 heteroaryl group, an arylalkyl group, or a C1–C7 acyl group; Ar12 represents a C6–C25 aryl group or a C5–C9 heteroaryl group; and R16 represents H, a C1–C6 alkyl group, or a C6–C12 aryl group. By providing the composite layer in at least part of 1 of the source electrode and the drain electrode, an energy barrier at an interface between a conductive layer and a semiconductor layer can be reduced.

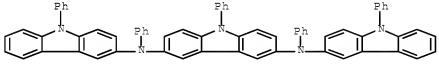
IT 894791-51-6P, 3,6-Bis(N-(1-naphthyl)-N-(9-phenylcarbazol-3-yl)amino)-9-(4-biphenylyl)carbazole
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic field effect transistor with composite layer source and drain electrodes containing a carbazole derivative)

RN 894791-51-6 CAPLUS

CN 9H-Carbazole-3,6-diamine, 9-[1,1'-biphenyl]-4-yl-N3,N6-di-1-naphthalenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



IT 873793-75-0P, 3,6-Bis(N-(p-phenylcarbazol-3-yl)-N-phenylamino)-9-phenylcarbazole
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic field effect transistor with composite layer source and drain electrodes containing a carbazole derivative)
RN 873793-75-0 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 28 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2007:619691 CAPLUS Full-text
DOCUMENT NUMBER: 147:41962
TITLE: Diaminoarylene compound having carbazolyl group and use thereof for electroluminescent element
INVENTOR(S): Yagi, Tadao; Suda, Yasumasa; Oryu, Yoshitake; Tanaka, Hiroaki; Toba, Yasumasa
PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan
SOURCE: PCT Int. Appl., 193pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007063986	A1	20070607	WO 2006-JP324094	20061201
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO,				

RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM

JP 4211869	B2	20090121	JP 2007-528500		20061201
KR 2008080513	A	20080904	KR 2008-7013038		20080530
CN 101321728	A	20081210	CN 2006-80045215		20080602
PRIORITY APPLN. INFO.:			JP 2005-349151	A	20051202
			JP 2006-65680	A	20060310
			JP 2006-205844	A	20060728
			JP 2006-212941	A	20060804
			WO 2006-JP324094	W	20061201

OTHER SOURCE(S): MARPAT 147:41962

AB Disclosed is a diaminoarylene compound having a carbazolyl group, which is represented by the general formula (Ar3)(Ar1)N-X-N(Ar2)(Ar4) [wherein Ar1 to Ar4 independently represent a univalent aromatic hydrocarbyl having 6 to 18 carbon atoms which may has a substituent, a univalent heterocyclic group having 2 to 18 carbon atoms which may have a substituent, or a 3-carbazolyl-derived group, provided that at least one of Ar1 to Ar4 represents a 3-carbazolyl-derived group; and X represents a phenanthrene-diyl-derived group which may have a substituent, an o-phenylene-derived group which may have a substituent, or an m-phenylene-derived group which may have a substituent]. Also disclosed is a material for an organic electroluminescence element, which comprises the diaminoarylene compound Further disclosed is an electroluminescence element using the material.

IT 934817-17-1P 938510-46-4P 938510-95-3P
938510-96-4P 938510-97-5P 938510-98-6P
938510-99-7P 938511-00-3P 938511-01-4P
938511-02-5P 938511-03-6P 938511-04-7P
938511-05-8P 938511-06-9P 938511-07-0P
938511-08-1P 938511-09-2P 938511-10-5P
938511-11-6P 938511-21-8P 938511-22-9P
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938511-29-6P 938511-30-9P 938511-31-0P
938511-32-1P 938511-33-2P 938511-34-3P
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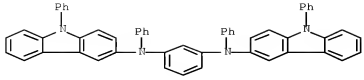
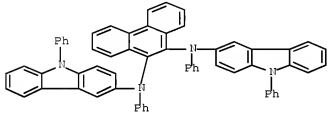
938511-47-8P 938511-48-9P 938511-49-0P
938511-50-3P 938511-51-4P 938511-52-5P
938511-53-6P 938511-54-7P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(diaminoarylene compound having carbazolyl group and use thereof for electroluminescent element)

RN 934817-17-1 CAPLUS

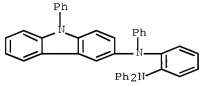
CN 1,3-Benzenediamine, N1,N3-diphenyl-N1,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



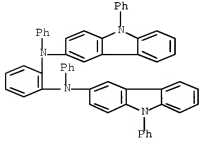
RN 938510-46-4 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



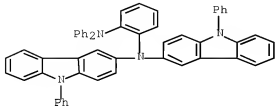
RN 938510-95-3 CAPLUS
CN 1,2-Benzenediamine, N1,N1,N2-triphenyl-N2-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



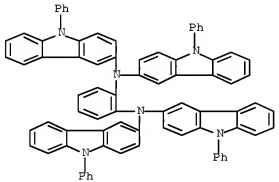
RN 938510-96-4 CAPLUS
CN 1,2-Benzenediamine, N1,N2-diphenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



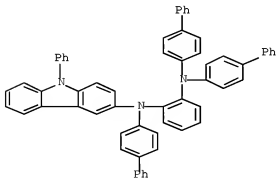
RN 938510-97-5 CAPLUS
CN 1,2-Benzenediamine, N1,N1-diphenyl-N2,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



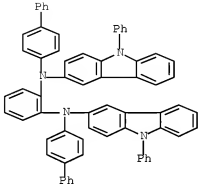
RN 938510-98-6 CAPLUS
CN 1,2-Benzenediamine, N1,N1,N2,N2-tetrakis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



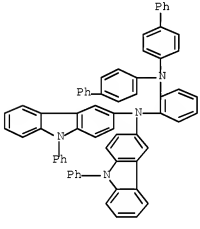
RN 938510-99-7 CAPLUS
CN 1,2-Benzenediamine, N1,N1,N2-tris([1,1'-biphenyl]-4-yl)-N2-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



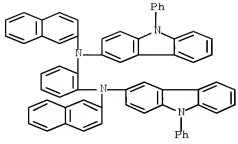
RN 938511-00-3 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis([1,1'-biphenyl]-4-yl)-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



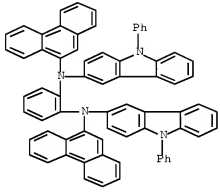
RN 938511-01-4 CAPLUS
CN 1,2-Benzenediamine, N1,N1-bis([1,1'-biphenyl]-4-yl)-N2,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



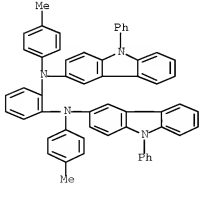
RN 938511-02-5 CAPLUS
CN 1,2-Benzenediamine, N1,N2-di-2-naphthalenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 938511-03-6 CAPLUS
CN 1,2-Benzenediamine, N1,N2-di-9-phenanthrenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

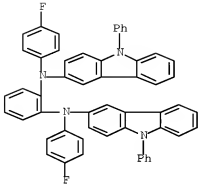


RN 938511-04-7 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis(4-methylphenyl)-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

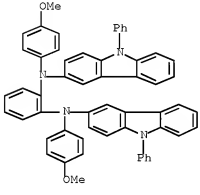


RN 938511-05-8 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis(4-fluorophenyl)-N1,N2-bis(9-phenyl-9H-

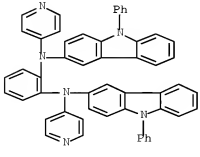
carbazol-3-yl)- (CA INDEX NAME)



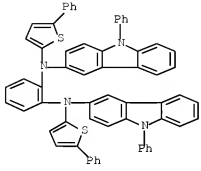
RN 938511-06-9 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis(4-methoxyphenyl)-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



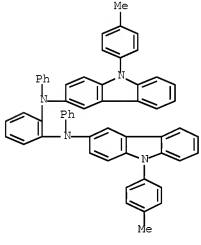
RN 938511-07-0 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis(9-phenyl-9H-carbazol-3-yl)-N1,N2-di-4-pyridinyl- (CA INDEX NAME)



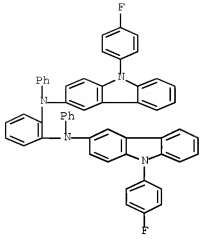
RN 938511-08-1 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis(9-phenyl-9H-carbazol-3-yl)-N1,N2-bis(5-phenyl-2-thienyl)- (CA INDEX NAME)



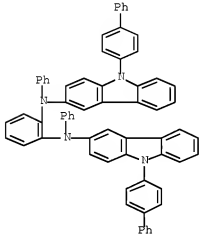
RN 938511-09-2 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis[9-(4-methylphenyl)-9H-carbazol-3-yl]-N1,N2-diphenyl- (CA INDEX NAME)



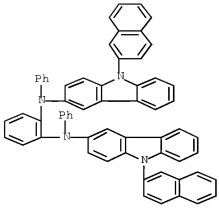
RN 938511-10-5 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis[9-(4-fluorophenyl)-9H-carbazol-3-yl]-N1,N2-diphenyl- (CA INDEX NAME)



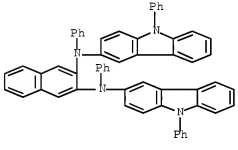
RN 938511-11-6 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis(9-[1,1'-biphenyl]-4-yl-9H-carbazol-3-yl)-N1,N2-diphenyl- (CA INDEX NAME)



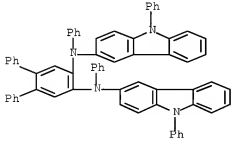
RN 938511-21-8 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis[9-(2-naphthalenyl)-9H-carbazol-3-yl]-N1,N2-diphenyl- (CA INDEX NAME)



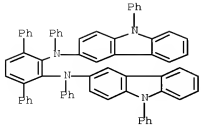
RN 938511-22-9 CAPLUS
CN 2,3-Naphthalenediamine, N2,N3-diphenyl-N2,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



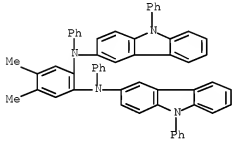
RN 938511-23-0 CAPLUS
CN [1,1':2',1''-Terphenyl]-4',5'-diamine, N4',N5'-diphenyl-N4',N5'-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



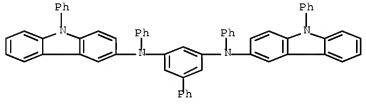
RN 938511-24-1 CAPLUS
CN [1,1':4',1''-Terphenyl]-2',3'-diamine, N2',N3'-diphenyl-N2',N3'-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



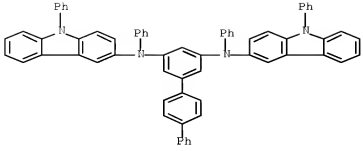
RN 938511-25-2 CAPLUS
CN 1,2-Benzenediamine, 4,5-dimethyl-N1,N2-diphenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



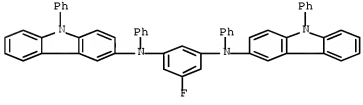
RN 938511-26-3 CAPLUS
CN [1,1'-Biphenyl]-3,5-diamine, N3,N5-diphenyl-N3,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



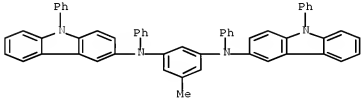
RN 938511-27-4 CAPLUS
CN [1,1':4',1''-Terphenyl]-3,5-diamine, N3,N5-diphenyl-N3,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



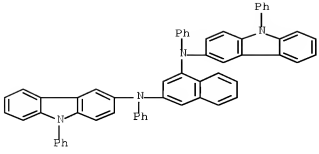
RN 938511-28-5 CAPLUS
CN 1,3-Benzenediamine, 5-fluoro-N1,N3-diphenyl-N1,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



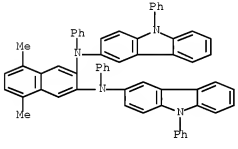
RN 938511-29-6 CAPLUS
CN 1,3-Benzenediamine, 5-methyl-N1,N3-diphenyl-N1,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



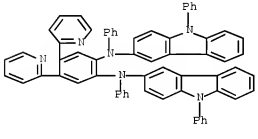
RN 938511-30-9 CAPLUS
CN 1,3-Naphthalenediamine, N1,N3-diphenyl-N1,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



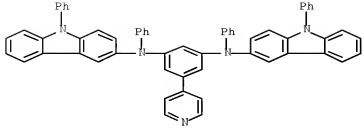
RN 938511-31-0 CAPLUS
CN 2,3-Naphthalenediamine, 5,8-dimethyl-N2,N3-diphenyl-N2,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



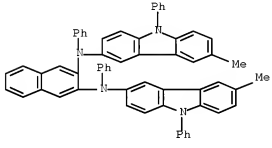
RN 938511-32-1 CAPLUS
CN 1,2-Benzenediamine, N1,N2-diphenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)-4,5-di-2-pyridinyl- (CA INDEX NAME)



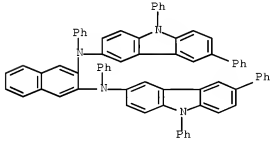
RN 938511-33-2 CAPLUS
CN 1,3-Benzenediamine, N1,N3-diphenyl-N1,N3-bis(9-phenyl-9H-carbazol-3-yl)-5-(4-pyridinyl)- (CA INDEX NAME)



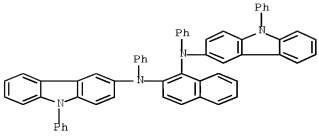
RN 938511-34-3 CAPLUS
CN 2,3-Naphthalenediamine, N2,N3-bis(6-methyl-9-phenyl-9H-carbazol-3-yl)-N2,N3-diphenyl- (CA INDEX NAME)



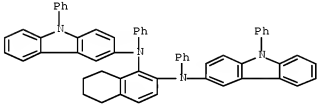
RN 938511-35-4 CAPLUS
CN 2,3-Naphthalenediamine, N2,N3-bis(6,9-diphenyl-9H-carbazol-3-yl)-N2,N3-diphenyl- (CA INDEX NAME)



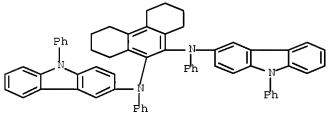
RN 938511-36-5 CAPLUS
CN 1,2-Naphthalenediamine, N1,N2-diphenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



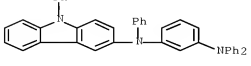
RN 938511-37-6 CAPLUS
CN 1,2-Naphthalenediamine, 5,6,7,8-tetrahydro-N1,N2-diphenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



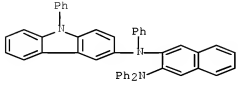
RN 938511-38-7 CAPLUS
CN 9,10-Phenanthrenediamine, 1,2,3,4,5,6,7,8-octahydro-N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



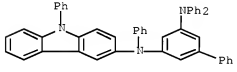
RN 938511-39-8 CAPLUS
CN 1,3-Benzenediamine, N1,N1,N3-triphenyl-N3-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



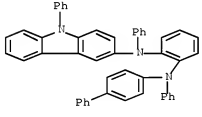
RN 938511-40-1 CAPLUS
CN 2,3-Naphthalenediamine, N2,N2,N3-triphenyl-N3-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



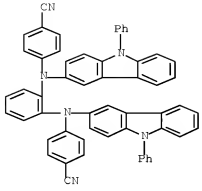
RN 938511-41-2 CAPLUS
CN [1,1'-Biphenyl]-3,5-diamine, N3,N3,N5-triphenyl-N5-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



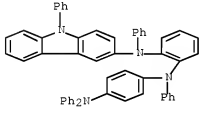
RN 938511-42-3 CAPLUS
CN 1,2-Benzenediamine, N1-[1,1'-biphenyl]-4-yl-N1,N2-diphenyl-N2-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



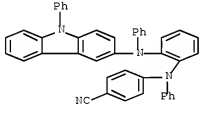
RN 938511-43-4 CAPLUS
CN Benzonitrile, 4,4'-[1,2-phenylenebis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



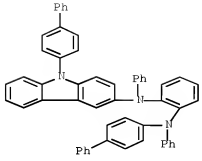
RN 938511-44-5 CAPLUS
CN 1,2-Benzenediamine, N1-[4-(diphenylamino)phenyl]-N1,N2-diphenyl-N2-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



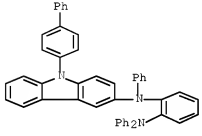
RN 938511-45-6 CAPLUS
CN Benzonitrile, 4-[phenyl[2-[phenyl(9-phenyl-9H-carbazol-3-yl)amino]phenyl]amino]- (CA INDEX NAME)



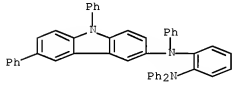
RN 938511-46-7 CAPLUS
CN 1,2-Benzenediamine, N1-[1,1'-biphenyl]-4-yl-N2-(9-[1,1'-biphenyl]-4-yl-9H-carbazol-3-yl)-N1,N2-diphenyl- (CA INDEX NAME)



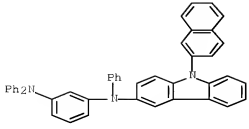
RN 938511-47-8 CAPLUS
CN 1,2-Benzenediamine, N1-(9-[1,1'-biphenyl]-4-yl-9H-carbazol-3-yl)-N1,N2,N2-triphenyl- (CA INDEX NAME)



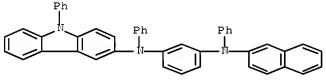
RN 938511-48-9 CAPLUS
CN 1,2-Benzenediamine, N1-(6,9-diphenyl-9H-carbazol-3-yl)-N1,N2,N2-triphenyl- (CA INDEX NAME)



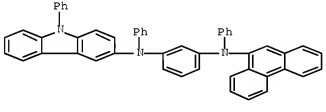
RN 938511-49-0 CAPLUS
CN 1,3-Benzenediamine, N1-[9-(2-naphthalenyl)-9H-carbazol-3-yl]-N1,N3,N3-triphenyl- (CA INDEX NAME)



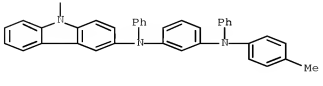
RN 938511-50-3 CAPLUS
CN 1,3-Benzenediamine, N1-2-naphthalenyl-N1,N3-diphenyl-N3-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 938511-51-4 CAPLUS
CN 1,3-Benzenediamine, N1-9-phenanthrenyl-N1,N3-diphenyl-N3-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

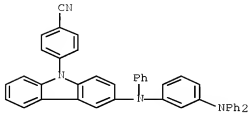


RN 938511-52-5 CAPLUS
CN 1,3-Benzenediamine, N1-(4-methylphenyl)-N1,N3-diphenyl-N3-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

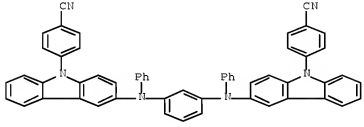


RN 938511-53-6 CAPLUS

CN Benzonitrile, 4-[3-[[3-(diphenylamino)phenyl]phenylamino]-9H-carbazol-9-yl]- (CA INDEX NAME)



RN 938511-54-7 CAPLUS
CN Benzonitrile, 4,4'-[1,3-phenylenebis[(phenylimino)-9H-carbazole-3,9-diyl]]bis- (CA INDEX NAME)



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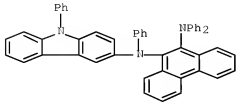
938511-78-5 938511-79-6
RL: TEM (Technical or engineered material use); USES (Uses)
(diaminoarylene compound having carbazolyl group and use thereof for electroluminescent element)
RN 938510-47-5 CAPLUS

CN 9,10-Phenanthrenediamine, N9,N9,N10-triphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 938510-48-6 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N9,N10,N10-tetrakis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

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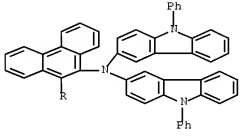

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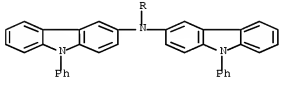
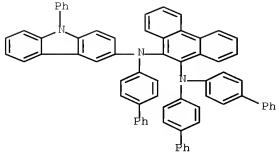
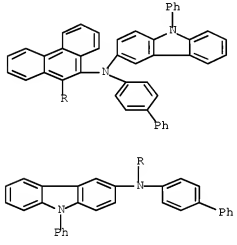


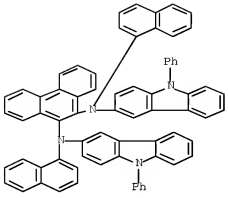
RN 938510-49-7 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N9,N10-tris([1,1'-biphenyl]-4-yl)-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 938510-50-0 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis([1,1'-biphenyl]-4-yl)-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 938510-51-1 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-di-1-naphthalenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 938510-52-2 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-di-2-naphthalenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

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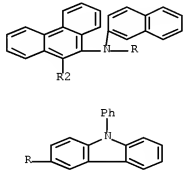

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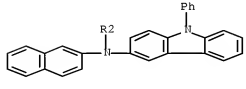

RN 938510-53-3 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-di-9-phenanthrenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

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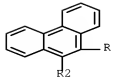

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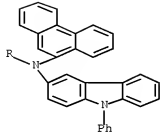

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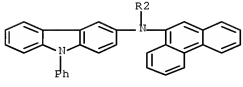

RN 938510-54-4 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-di-9-anthracenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

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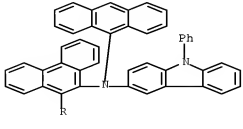
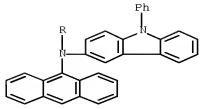
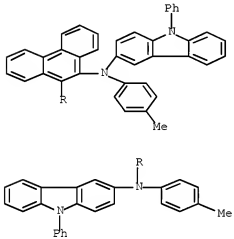
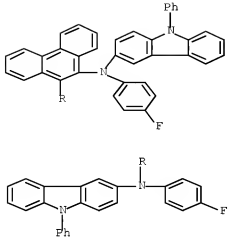




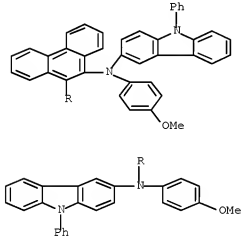
RN 938510-55-5 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis(4-methylphenyl)-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



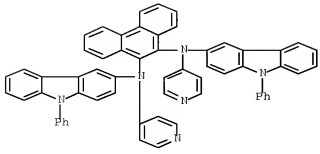
RN 938510-56-6 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis(4-fluorophenyl)-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



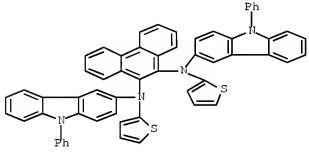
RN 938510-57-7 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis(4-methoxyphenyl)-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



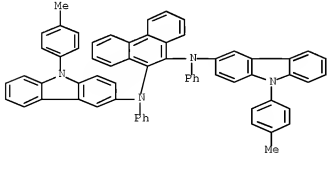
RN 938510-58-8 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis(9-phenyl-9H-carbazol-3-yl)-N9,N10-di-4-pyridinyl- (CA INDEX NAME)



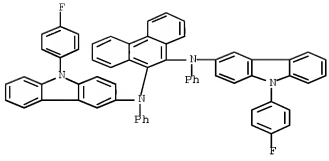
RN 938510-59-9 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis(9-phenyl-9H-carbazol-3-yl)-N9,N10-di-2-thienyl- (CA INDEX NAME)



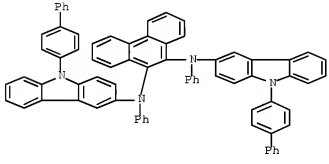
RN 938510-60-2 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis[9-(4-methylphenyl)-9H-carbazol-3-yl]-N9,N10-diphenyl- (CA INDEX NAME)



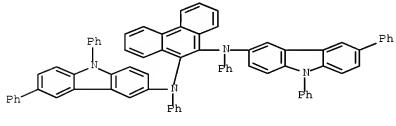
RN 938510-61-3 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis[9-(4-fluorophenyl)-9H-carbazol-3-yl]-N9,N10-diphenyl- (CA INDEX NAME)



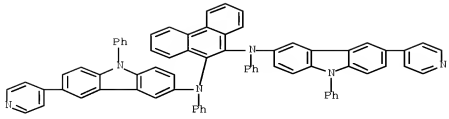
RN 938510-62-4 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis(9-[1,1'-biphenyl]-4-yl-9H-carbazol-3-yl)-N9,N10-diphenyl- (CA INDEX NAME)



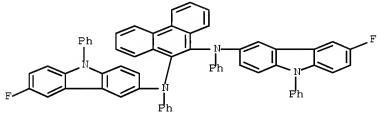
RN 938510-66-8 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis(6,9-diphenyl-9H-carbazol-3-yl)-N9,N10-diphenyl- (CA INDEX NAME)



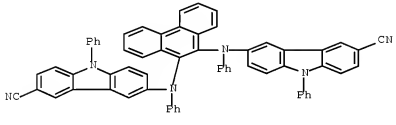
RN 938510-67-9 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-diphenyl-N9,N10-bis[9-phenyl-6-(4-pyridinyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



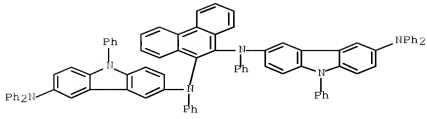
RN 938510-68-0 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis(6-fluoro-9-phenyl-9H-carbazol-3-yl)-N9,N10-diphenyl- (CA INDEX NAME)



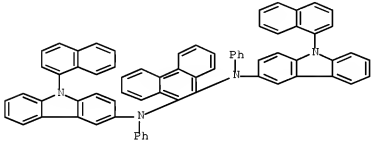
RN 938510-70-4 CAPLUS
CN 9H-Carbazole-3-carbonitrile, 6,6'-[9,10-phenanthrenediylbis(phenylimino)]bis[9-phenyl- (CA INDEX NAME)



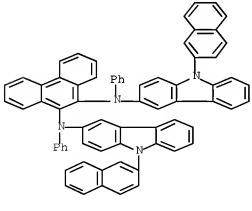
RN 938510-73-7 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N3'-9,10-phenanthrenediylbis[N3,N6,N6,9-tetraphenyl- (CA INDEX NAME)



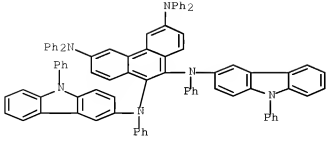
RN 938510-74-8 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis[9-(1-naphthalenyl)-9H-carbazol-3-yl]-N9,N10-diphenyl- (CA INDEX NAME)



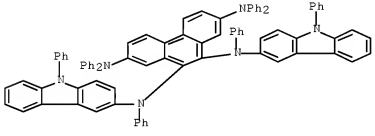
RN 938510-75-9 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis[9-(2-naphthalenyl)-9H-carbazol-3-yl]-N9,N10-diphenyl- (CA INDEX NAME)



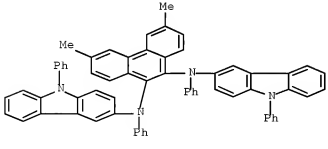
RN 938510-76-0 CAPLUS
CN 3,6,9,10-Phenanthrenetetramine, N3,N3,N6,N6,N9,N10-hexaphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



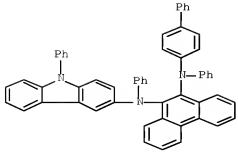
RN 938510-77-1 CAPLUS
CN 2,7,9,10-Phenanthrenetetramine, N2,N2,N7,N7,N9,N10-hexaphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



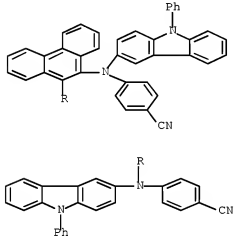
RN 938510-78-2 CAPLUS
CN 9,10-Phenanthrenediamine, 3,6-dimethyl-N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



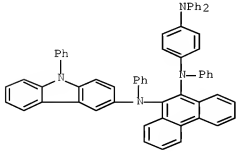
RN 938510-79-3 CAPLUS
CN 9,10-Phenanthrenediamine, N9-[1,1'-biphenyl]-4-yl-N9,N10-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



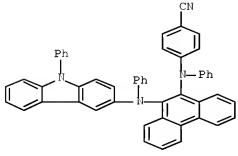
RN 938510-80-6 CAPLUS
CN Benzonitrile, 4,4'-[9,10-phenanthrenediylbis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



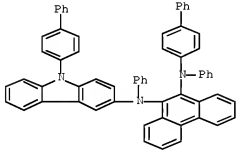
RN 938510-81-7 CAPLUS
CN 9,10-Phenanthrenediamine, N9-[4-(diphenylamino)phenyl]-N9,N10-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



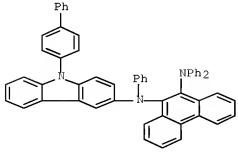
RN 938510-82-8 CAPLUS
CN Benzonitrile, 4-[phenyl[10-[phenyl(9-phenyl-9H-carbazol-3-yl)amino]-9-phenanthrenyl]amino]- (CA INDEX NAME)



RN 938510-83-9 CAPLUS
CN 9,10-Phenanthrenediamine, N9-[1,1'-biphenyl]-4-yl-N10-(9-[1,1'-biphenyl]-4-yl-9H-carbazol-3-yl)-N9,N10-diphenyl- (CA INDEX NAME)

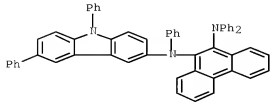


RN 938510-84-0 CAPLUS
CN 9,10-Phenanthrenediamine, N9-(9-[1,1'-biphenyl]-4-yl-9H-carbazol-3-yl)-N9,N10,N10-triphenyl- (CA INDEX NAME)

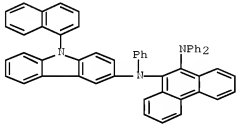


RN 938510-85-1 CAPLUS

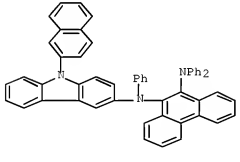
CN 9,10-Phenanthrenediamine, N9-(6,9-diphenyl-9H-carbazol-3-yl)-N9,N10,N10-triphenyl- (CA INDEX NAME)



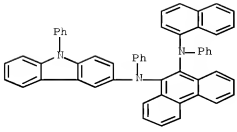
RN 938510-86-2 CAPLUS
CN 9,10-Phenanthrenediamine, N9-[9-(1-naphthalenyl)-9H-carbazol-3-yl]-N9,N10,N10-triphenyl- (CA INDEX NAME)



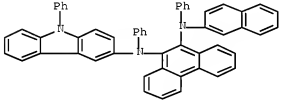
RN 938510-87-3 CAPLUS
CN 9,10-Phenanthrenediamine, N9-[9-(2-naphthalenyl)-9H-carbazol-3-yl]-N9,N10,N10-triphenyl- (CA INDEX NAME)



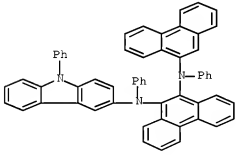
RN 938510-88-4 CAPLUS
CN 9,10-Phenanthrenediamine, N9-1-naphthalenyl-N9,N10-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



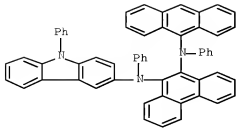
RN 938510-89-5 CAPLUS
CN 9,10-Phenanthrenediamine, N9-2-naphthalenyl-N9,N10-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



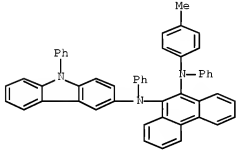
RN 938510-90-8 CAPLUS
CN 9,10-Phenanthrenediamine, N9-9-phenanthrenyl-N9,N10-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



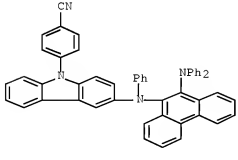
RN 938510-91-9 CAPLUS
CN 9,10-Phenanthrenediamine, N9-9-anthracenyl-N9,N10-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



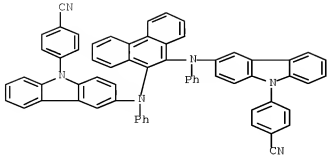
RN 938510-92-0 CAPLUS
CN 9,10-Phenanthrenediamine, N9-(4-methylphenyl)-N9,N10-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



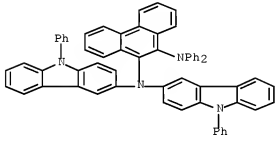
RN 938510-93-1 CAPLUS
CN Benzonitrile, 4-[3-[[10-(diphenylamino)-9-phenanthrenyl]phenylamino]-9H-carbazol-9-yl]- (CA INDEX NAME)



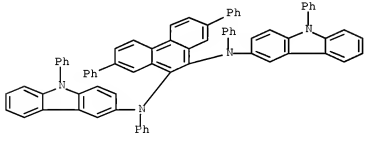
RN 938510-94-2 CAPLUS
CN Benzonitrile, 4,4'-[9,10-phenanthrenediylbis[(phenylimino)-9H-carbazole-3,9-diyl]]bis- (CA INDEX NAME)



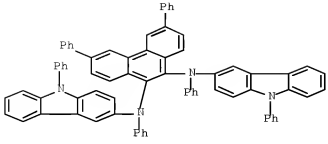
RN 938511-55-8 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N9-diphenyl-N10,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



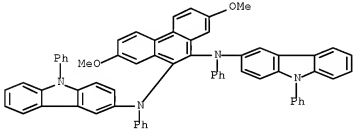
RN 938511-56-9 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10,2,7-tetraphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



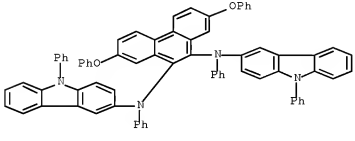
RN 938511-57-0 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10,3,6-tetraphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



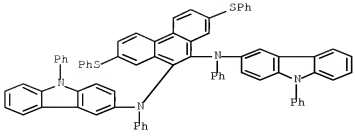
RN 938511-58-1 CAPLUS
CN 9,10-Phenanthrenediamine, 2,7-dimethoxy-N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



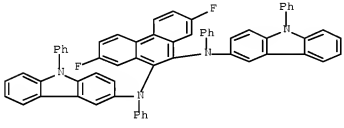
RN 938511-59-2 CAPLUS
CN 9,10-Phenanthrenediamine, 2,7-diphenoxy-N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



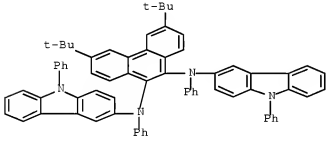
RN 938511-60-5 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)-2,7-bis(phenylthio)- (CA INDEX NAME)



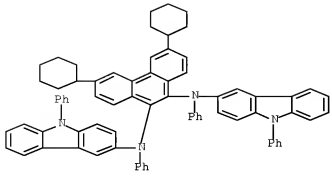
RN 938511-61-6 CAPLUS
CN 9,10-Phenanthrenediamine, 2,7-difluoro-N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



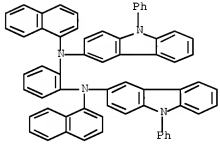
RN 938511-62-7 CAPLUS
CN 9,10-Phenanthrenediamine, 3,6-bis(1,1-dimethylethyl)-N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



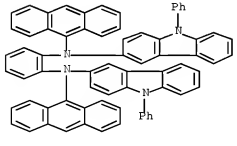
RN 938511-63-8 CAPLUS
CN 9,10-Phenanthrenediamine, 3,6-dicyclohexyl-N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



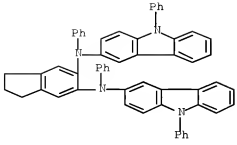
RN 938511-64-9 CAPLUS
CN 1,2-Benzenediamine, N1,N2-di-1-naphthalenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



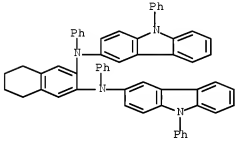
RN 938511-65-0 CAPLUS
CN 1,2-Benzenediamine, N1,N2-di-9-anthracenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



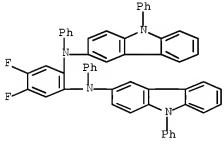
RN 938511-68-3 CAPLUS
CN 1H-Indene-5,6-diamine, 2,3-dihydro-N5,N6-diphenyl-N5,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



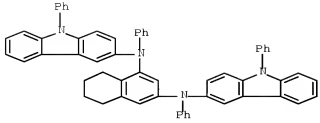
RN 938511-69-4 CAPLUS
CN 2,3-Naphthalenediamine, 5,6,7,8-tetrahydro-N2,N3-diphenyl-N2,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



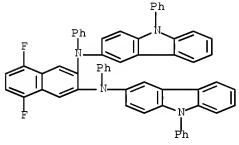
RN 938511-70-7 CAPLUS
CN 1,2-Benzenediamine, 4,5-difluoro-N1,N2-diphenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



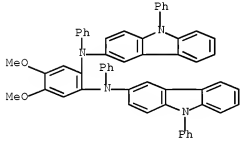
RN 938511-71-8 CAPLUS
CN 1,3-Naphthalenediamine, 5,6,7,8-tetrahydro-N1,N3-diphenyl-N1,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



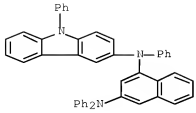
RN 938511-72-9 CAPLUS
CN 2,3-Naphthalenediamine, 5,8-difluoro-N2,N3-diphenyl-N2,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



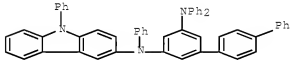
RN 938511-73-0 CAPLUS
CN 1,2-Benzenediamine, 4,5-dimethoxy-N1,N2-diphenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



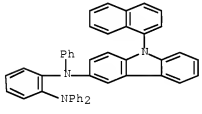
RN 938511-74-1 CAPLUS
CN 1,3-Naphthalenediamine, N1,N3,N3-triphenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



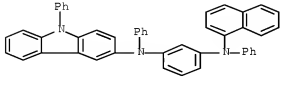
RN 938511-75-2 CAPLUS
CN [1,1':4',1''-Terphenyl]-3,5-diamine,
N3,N3,N5-triphenyl-N5-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



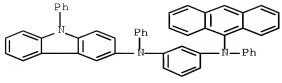
RN 938511-76-3 CAPLUS
CN 1,2-Benzenediamine, N1-[9-(1-naphthalenyl)-9H-carbazol-3-yl]-N1,N2,N2-
triphenyl- (CA INDEX NAME)



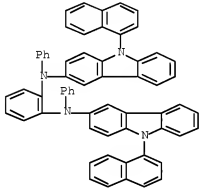
RN 938511-77-4 CAPLUS
CN 1,3-Benzenediamine, N1-1-naphthalenyl-N1,N3-diphenyl-N3-(9-phenyl-9H-
carbazol-3-yl)- (CA INDEX NAME)



RN 938511-78-5 CAPLUS
CN 1,3-Benzenediamine, N1-9-anthracenyl-N1,N3-diphenyl-N3-(9-phenyl-9H-
carbazol-3-yl)- (CA INDEX NAME)



RN 938511-79-6 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis[9-(1-naphthalenyl)-9H-carbazol-3-yl]-N1,N2-diphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 29 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2007:534695 CAPLUS Full-text
DOCUMENT NUMBER: 146:510113
TITLE: Organic electroluminescent materials with excellent emission efficiency and stability and organic electroluminescent devices using them
INVENTOR(S): Suda, Yasumasa; Toba, Yasumasa; Odachi, Yoshitake; Tanaka, Hiroaki; Yagi, Tamao
PATENT ASSIGNEE(S): Toyo Ink Mfg. Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 18pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007123714	A	20070517	JP 2005-316684	20051031
PRIORITY APPLN. INFO.:			JP 2005-316684	20051031

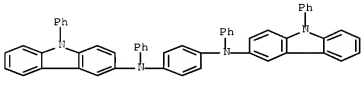
AB The materials show the absolute value of the difference between total energy of neutral mols. (calculated by nonempirical MO method) and total energy of

them in radical cationic states ≥5.10 eV and the absolute value of the difference between energy level of highest-occupied MO (HOMO) of neutral mols. and energy level of lowest-unoccupied MO (LUMO) of β-spin electrons of them in radical cationic states ≤2.40 eV.

IT 887403-00-1P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(hole-injecting layer; organic electroluminescent materials with high emission efficiency and stability)

RN 887403-00-1 CAPLUS

CN 1,4-Benzenediamine, N1,N4-diphenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



L3 ANSWER 30 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER: 2007:464231 CAPLUS Full-text

DOCUMENT NUMBER: 146:471846

TITLE: Aromatic amine compounds and light-emitting elements and devices using them and electronic devices using the light-emitting devices in displays

INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko; Shitagaki, Satoko; Seo, Satoshi

PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan

SOURCE: PCT Int. Appl., 194pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007046486	A1	20070426	WO 2006-JP320889	20061013
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
US 20070096639	A1	20070503	US 2006-581086	20061016
US 7442803	B2	20081028		
JP 2007137873	A	20070607	JP 2006-282957	20061017
KR 2008068073	A	20080722	KR 2008-7011706	20080516

US 20080312454	A1	20081218	US 2008-219786		20080729
US 7795449	B2	20100914			
US 20100308319	A1	20101209	US 2010-858761		20100818
PRIORITY APPLN. INFO.:			JP 2005-302853	A	20051018
			WO 2006-JP320889	W	20061013
			US 2006-581086	A3	20061016
			US 2008-219786	A1	20080729

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 146:471846

AB Aromatic amine compds. are described which comprise a 1,3,5-triaminophenyl or 1,3-diaminophenyl core with carbozole derivative substituents attached to the amino nitrogens either directly or via arylene groups. Light-emitting elements and devices using the compds. and electronic devices using the light-emitting devices in displays are also described.

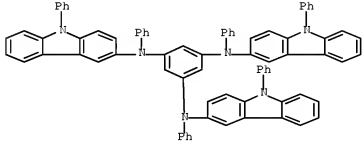
IT 934817-16-0P 934817-17-1P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(aromatic amine compds. and light-emitting elements and devices using them and electronic devices using light-emitting devices in displays)

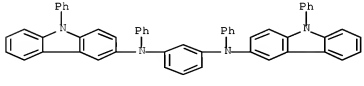
RN 934817-16-0 CAPLUS

CN 1,3,5-Benzenetriamine, N1,N3,N5-triphenyl-N1,N3,N5-tris(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 934817-17-1 CAPLUS

CN 1,3-Benzenediamine, N1,N3-diphenyl-N1,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT:	1	THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)
REFERENCE COUNT:	2	THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 31 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER: 2007:438297 CAPLUS Full-text

DOCUMENT NUMBER: 146:441661
TITLE: Preparation of carbazole-containing amine compounds as hole-injection materials for organic electroluminescent devices
INVENTOR(S): Yagi, Tadao; Toba, Yasumasa; Tanaka, Hiroaki; Suda, Yasumasa; Oryu, Yoshitake; Tamano, Michiko
PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan
SOURCE: PCT Int. Appl., 228pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007043484	A1	20070419	WO 2006-JP320131	20061006
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2007126439	A	20070524	JP 2006-205845	20060728
JP 4169085	B2	20081022	JP 2007-539929	20061006
KR 2008064114	A	20080708	KR 2008-7006524	20080318
CN 101282931	A	20081008	CN 2006-80037126	20080407
PRIORITY APPLN. INFO.:			JP 2005-294504 A	20051007
			JP 2006-212939 A	20060804
			JP 2006-212940 A	20060804
			JP 2006-250335 A	20060915
			WO 2006-JP320131 W	20061006

OTHER SOURCE(S): MARPAT 146:441661
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

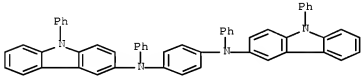
AB N-carbazolylphenylenediamine and N-carbazolylbenzidine represented by the general formula [I; A = Q, Q1; one of R1-R5 = a bond and the others = H, halo, or a monovalent organic group; one of R6-R10 and one of R11-R15 = a bond and the others = H, halo, or a monovalent organic group; Ar1- Ar4 = (un)substituted monovalent C6-18 aromatic hydrocarbon group or monovalent C2-18 heterocyclyl, or Q2; Ar5 = (un)substituted monovalent C6-18 aromatic hydrocarbon group or monovalent C2-18 aromatic heterocyclyl; R16-R22 = H, halo, or a monovalent organic group] are prepared These compds. form a stable thin film since they have a high Tg and the mols. thereof hardly crystallize. They are useful as a chemical light-emitting material having excellent characteristics such as low-voltage driving and long life when they are used as hole-injection materials for organic electroluminescent (EL) devices EL devices. Thus, coupling of 9-(2-naphthyl)-3-iodocarbazole with N,N'-diphenylbenzidine in the presence of Cu powder and K2CO3 in nitrobenzene at

190-200° for 20 h gave N,N'-bis(carbazolyl)benzidine (II) (Tg = 172°). An organic electroluminescent device with a hole-injection layer (20 nm) vapor-deposited using II showed a half life of >5,000, and initial luminance of 550 cd/m2 and 540 cd/m2 at 10 mA/cm2 and 150° after 100 h.

IT 887403-00-1, 1,4-Bis[N-phenyl-N-(9-phenylcarbazol-3-yl)amino]benzene
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of carbazole-containing amine compds. as hole-injection materials for organic electroluminescent devices)

RN 887403-00-1 CAPLUS

CN 1,4-Benzenediamine, N1,N4-diphenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 32 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER: 2007:175254 CAPLUS Full-text

DOCUMENT NUMBER: 146:238974

TITLE: Arylamine compounds which have resistance to repeated oxidation reactions, and light-emitting elements and electronic devices employing the arylamine compounds

INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko

PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Japan

SOURCE: U.S. Pat. Appl. Publ., 48pp.
CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070037011	A1	20070215	US 2006-500278	20060808
WO 2007020804	A1	20070222	WO 2006-JP315351	20060727

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

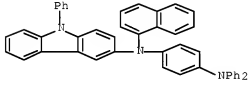
JP 2007070352	A	20070322	JP 2006-217779		20060810
CN 101243038	A	20080813	CN 2006-80029357		20080213
KR 2008034191	A	20080418	KR 2008-7005376		20080304
PRIORITY APPLN. INFO.:			JP 2005-234432	A	20050812
			WO 2006-JP315351	W	20060727

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 146:238974

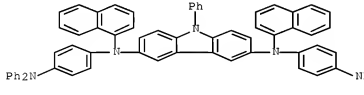
AB Secondary arylamine compds. having resistance to repeated oxidation reactions are described by the General Formula NH(Ar1)XN(Ar2)Ar3, wherein Ar1 is one of an aryl group having 7 to 25 C atoms and a heteroaryl group having 7 to 25 C atoms, where each of Ar2 and Ar3 is one of an aryl group having 6 to 25 C atoms and a heteroaryl group having 5 to 9 C atoms, and where X is one of a bivalent aromatic hydrocarbon group having 6 to 25 C atoms and a bivalent heterocyclic group having 5 to 10 C atoms. Light-emitting elements and electronic devices employing the arylamine compds. are also discussed.

IT 884510-66-1P 884510-67-2P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(arylamine compds. which have resistance to repeated oxidation reactions, and light-emitting elements and electronic devices employing arylamine compds.)

RN 884510-66-1 CAPLUS
CN 1,4-Benzenediamine, N1-1-naphthalenyl-N4,N4-diphenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 884510-67-2 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6-di-1-naphthalenyl-9-phenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L3 ANSWER 33 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2007:150564 CAPLUS Full-text
DOCUMENT NUMBER: 146:216024
TITLE: Carbazole derivatives, light-emitting element material obtained by using carbazole derivative, light-emitting

element, and electronic device
INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko; Kojima, Kumi; Nomura, Ryoji; Ohsawa, Nobuharu
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: PCT Int. Appl., 235pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007015407	A1	20070208	WO 2006-JP314820	20060720
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1910289	A1	20080416	EP 2006-781732	20060720
R: DE, FI, FR, GB, NL				
JP 2007063258	A	20070315	JP 2006-202396	20060725
US 20070031701	A1	20070208	US 2006-494538	20060728
PRIORITY APPLN. INFO.:			JP 2005-226225 A	20050804
			WO 2006-JP314820 W	20060720

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 146:216024
GI

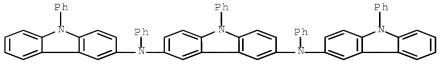
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title carbazole derivs. are described by the general formula I (Ar1 and Ar2 = independently selected C1-12 aryl group; and R1 = H, C1-4 alkyl, or C6-12 aryl); light-emitting materials described by the general formulas II and III (R2 = H, Me, or tert-butyl; R3 = H, C1-4 alkyl, and C6-12 aryl; R4 and R5 = independently selected H or IV, with the restriction that ≥1 of R4 and R5 = IV; R6 = H, C1-4 alkyl, or C6-12 aryl; and Ar5-9 = independently selected C1-12 aryl) are also provided. Light-emitting elements using the light-emitting materials, light-emitting devices incorporating the elements, and electronic device comprising the light-emitting devices in a display portion or a lighting portion are also described. The use of the carbazole derivs. in the production of oxidation-resistant light-emitting materials is discussed.

IT 873793-75-0P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(carbazole derivs. and related light-emitting materials and light-emitting devices and electronic devices using them)

RN 873793-75-0 CAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 34 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2006:1069986 CAPLUS Full-text
DOCUMENT NUMBER: 145:429603
TITLE: Display device including a light-emitting element and electronic device using the same
INVENTOR(S): Hayakawa, Masahiko; Yoshitomi, Shuhei; Tokumaru, Ryo
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: U.S. Pat. Appl. Publ., 23pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060228822	A1	20061012	US 2006-389233	20060327
US 7777232	B2	20100817		
CN 1849023	A	20061018	CN 2006-10071996	20060406
CN 100534245	C	20090826		
CN 101599504	A	20091209	CN 2009-10159447	20060406
JP 2006317921	A	20061124	JP 2006-108185	20060411
PRIORITY APPLN. INFO.:			JP 2005-113054 A	20050411
			CN 2006-10071996 A3	20060406

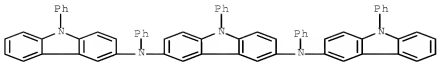
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB A display device and an electronic device is described in which the display device can accurately correct an elec. potential transmitted to a light-emitting element by using a light-emitting element and a monotoring light-emitting element both of which have the same progress of change with time. The display device uses a first light-emitting element, a second light-emitting element, a constant current source, and an amplifier. Each of the first light-emitting element and the second light-emitting element has a first layer including an organic compound and an inorg. compound and a second layer including a light-emitting substance, which are stacked between a pair of electrodes. The first layer is provided over the second layer. Alternatively, the second layer is provided over the first layer.

IT 873793-75-0
RL: TEM (Technical or engineered material use); USES (Uses)
(display device including a light-emitting element and electronic device using the same)

RN 873793-75-0 CAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



REFERENCE COUNT: 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 35 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2006:1056963 CAPLUS Full-text
DOCUMENT NUMBER: 145:497258
TITLE: Composite material, light-emitting element and device using the composite material
INVENTOR(S): Iwaki, Yuji; Seo, Satoshi; Kumaki, Daisuke; Nakashima, Haruke; Kojima, Kumi
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 166pp. CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1837324	A	20060927	CN 2006-10071838	20060323
US 20090309093	A1	20091217	US 2006-371217	20060309
US 7649197	B2	20100119		
JP 2007036188	A	20070208	JP 2006-79352	20060322
KR 2006103187	A	20060928	KR 2006-26550	20060323
US 20100084645	A1	20100408	US 2009-575488	20091008
KR 2011056458	A	20110530	KR 2011-25791	20110323
KR 2011058749	A	20110601	KR 2011-25790	20110323

PRIORITY APPLN. INFO.:

JP 2005-85035	A	20050323
JP 2005-130619	A	20050427
JP 2005-144252	A	20050517
JP 2005-185018	A	20050624
US 2006-371217	A3	20060309
KR 2006-26550	A3	20060323

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

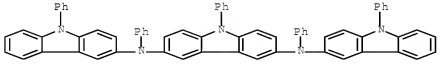
AB The composite material comprises carbazole derivs. having general formula(1), and inorg. compound which can display electron-accepting performance to carbazole derivs.., wherein R11 and/or R13 is H, C1-C6 alkyl, C6-C25 aryl, C5-C9 heteroaryl, aralkyl and acyl with 1-7 carbon atom number; Ar11 is one of C6-C25 aryl and C5-C9 heteroaryl, R12 is one of H, C1-C6 alkyl and C6-C12 aryl, R14 is one of H, C1-C6 alkyl and C6-C12 aryl and substituted group having general formula (2). The inorg. compound is one or more of titania, V2O5, molybdenum oxide, tungsten oxide, rhenium oxide, ruthenium oxide, chromium oxide, zirconia, hafnium oxide, tantalum oxide and silver oxide. The light-emitting element comprises luminescent substance layer between a pair of electrodes, wherein the luminescent substance layer comprises the above composite material. The light-emitting device comprises the light-emitting element, control device for light emission of light-emitting element. An elec. appliance comprises a display unit, which comprises light-emitting device.

IT 873793-75-9P 894793-51-6P
RL: DEV (Device component use); PRP (Properties); SPN (Synthetic

preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(composite material, light-emitting element and device using composite material)

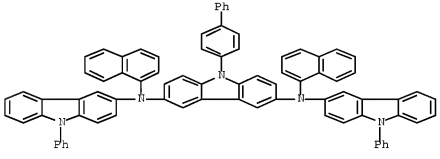
RN 873793-75-0 CAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 894791-51-6 CAPLUS

CN 9H-Carbazole-3,6-diamine, 9-[1,1'-biphenyl]-4-yl-N3,N6-di-1-naphthalenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



L3 ANSWER 36 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER: 2006:656236 CAPLUS Full-text

DOCUMENT NUMBER: 145:113065

TITLE: Carbazole derivative for light-emitting device

INVENTOR(S): Nakashima, Harue; Kumaki, Daisuke; Kojima, Kumi; Seo, Satoshi; Kawakami, Sachiko

PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan

SOURCE: PCT Int. Appl., 140 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006070912	A1	20060706	WO 2005-JP24212	20051226

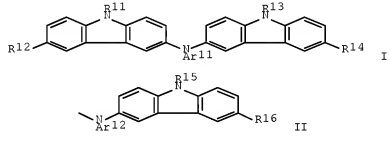
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE,

SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

CN 101103001	A	20080109	CN 2005-80047016	20051226
JP 2006298898	A	20061102	JP 2005-374977	20051227
US 20080254318	A1	20081016	US 2006-585326	20060706
KR 2007089985	A	20070904	KR 2007-7015235	20070703

PRIORITY APPLN. INFO.: JP 2004-381155 A 20041228
JP 2005-85020 A 20050323
WO 2005-JP24212 W 20051226

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 145:113065
GI

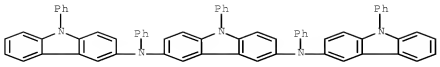


AB The present invention provides a material having excellent hole injecting and hole transporting properties. Also, the present invention provides a light-emitting element and a light-emitting device using the material having excellent hole injecting and hole transporting properties. The present invention provides a carbazole derivative represented by I [R11 and R13 = H, C1-6 alkyl, C6-25 aryl, C5-9 heteroaryl, arylalkyl, and C1-7 acyl; Ar11= C6-25 aryl and C5-9 heteroaryl; R12 = H, C1-6 alkyl, and C6-12 aryl; R14 = H, C1-6 alkyl, C6-12 aryl and II [R15 = H, C1-6 alkyl, C6-25 aryl, C5-9 heteroaryl, arylalkyl, and C1-7 acyl; Ar12 = C6-25 aryl and C5-9 heteroaryl; R16 = H, C1-6 alkyl, and C6-12 aryl]]. By applying the carbazole derivative of the present invention to a light-emitting element or a light-emitting device, a lower driving voltage, enhanced emission efficiency, a longer lifetime and enhanced reliability of the light-emitting element or the light-emitting device can be realized.

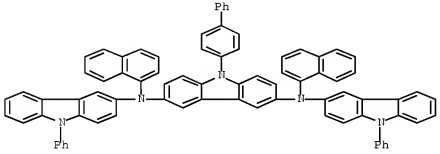
IT 873793-75-0P 894791-51-6P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(carbazole derivative for light-emitting device)

RN 873793-75-0 CAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 894791-51-6 CAPLUS
CN 9H-Carbazole-3,6-diamine, 9-[1,1'-biphenyl]-4-yl-N3,N6-di-1-naphthalenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 37 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2006:542713 CAPLUS Full-text
DOCUMENT NUMBER: 145:17408
TITLE: Light emitting element that includes a mixed carbazole derivative-transition metal oxide hole transport layer
INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko; Kumaki, Daisuke; Seo, Satoshi; Ikeda, Hisao; Sakata, Junichiro; Iwaki, Yuji
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: PCT Int. Appl., 145 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006059745	A1	20060608	WO 2005-JP22240	20051128

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,

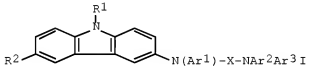
IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

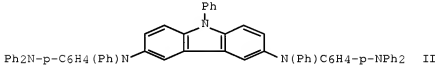
CN 101065858	A	20071031	CN 2005-80040713		20051128
CN 100553008	C	20091021			
CN 101847690	A	20100929	CN 2009-10171034		20051128
JP 2006303421	A	20061102	JP 2005-345745		20051130
US 20090058267	A1	20090305	US 2006-584308		20060623
KR 2007090215	A	20070905	KR 2007-7014544		20070626
PRIORITY APPLN. INFO.:			JP 2004-347518	A	20041130
			JP 2005-84566	A	20050323
			CN 2005-80040713	A3	20051128
			WO 2005-JP22240	W	20051128

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

OTHER SOURCE(S): MARPAT 145:17408

GI





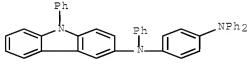
AB One object of the present invention is to provide a light emitting element that includes an organic compound and an inorg. compound and has low driving voltage. The light emitting element of the invention includes a plurality of layers between a pair of electrodes, wherein the plurality of layers includes a layer that contains a carbazole derivative represented by a general formula (I; R1 = e.g., H, alkyl, aryl; R2 = H, alkyl, NAr4YNAr5Ar6; Ar1-Ar6 = aryl, heteroaryl; X, Y = bivalent aromatic hydrocarbon or bivalent heterocycle) and an inorg. compound exhibiting an electron accepting property with respect to the carbazole derivative By utilizing this structure, electrons are transported between the carbazole derivative and the inorg. compound and carriers are internally generated, and hence, the driving voltage of the light emitting element can be reduced. Thus, e.g., coupling of 3,6-diiodo-9-phenylcarbazole (preparation given) with PhNHC6H4-p-NPh2 (preparation given) afforded target carbazole II (75% yield). A 50 nm film containing II and molybdenum oxide (1:1.5 molar ratio) exhibited a charge-transfer absorption band (absent in either component of the film taken individually) representing hole generation in II and electron acceptance by molybdenum oxide; consequently, the driving voltage of a light-emitting element can be reduced because of this internal carrier generation.

IT 864510-64-9P 864510-65-0P 864510-66-1P 864510-67-2P

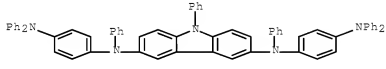
RL: CPS (Chemical process); DEV (Device component use); PEP (Physical,

engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(light emitting element that includes a mixed carbazole derivative-transition metal oxide hole transport layer)

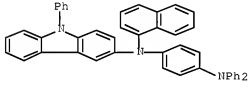
RN 884510-64-9 CAPLUS
CN 1,4-Benzenediamine, N1,N1,N4-triphenyl-N4-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



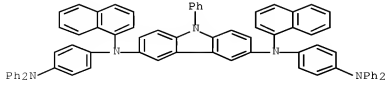
RN 884510-65-0 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6,9-triphenyl- (CA INDEX NAME)



RN 884510-66-1 CAPLUS
CN 1,4-Benzenediamine, N1-1-naphthalenyl-N4,N4-diphenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 884510-67-2 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6-di-1-naphthalenyl-9-phenyl- (CA INDEX NAME)

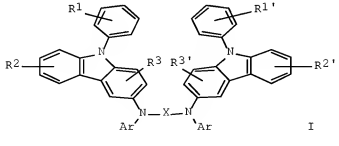


OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 38 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2006:510780 CAPLUS Full-text
DOCUMENT NUMBER: 144:497862
TITLE: Phenylcarbazole-based compound and organic electroluminescent device employing the same
INVENTOR(S): Hwang, Seok-Hwan; Kim, Young-Kook; Lee, Chang-Ho; Lee, Seok-Jong; Yang, Seung-Gak; Kim, Hee-Yeon
PATENT ASSIGNEE(S): Samsung Sdi Co., Ltd., S. Korea
SOURCE: Eur. Pat. Appl., 34 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1661888	A1	20060531	EP 2005-111348	20051128
EP 1661888	B1	20081112		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
KR 2006059613	A	20060602	KR 2004-98747	20041129
KR 787425	B1	20071226		
JP 2006151979	A	20060615	JP 2005-342448	20051128
JP 4589223	B2	20101201		
CN 1978441	A	20070613	CN 2005-10121732	20051129
JP 2010222355	A	20101007	JP 2010-68464	20100324
PRIORITY APPLN. INFO.:			KR 2004-98747 A	20041129
			JP 2005-342448 A3	20051128

OTHER SOURCE(S): CASREACT 144:497862; MARPAT 144:497862
GI



I

AB Phenylcarbazole-based compound is represented by I [X = e.g., (un)substituted alkylene, alkenylene, arylene, heteroarylene; all R groups selected from,

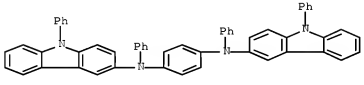
e.g., H, (un)substituted alkyl, alkoxy aryl, aryloxy; Ar = aryl, heteroaryl] and has superior elec. properties and charge transport abilities, and thus is useful as a hole injection material, a hole transport material, and/or an emitting material which is suitable for fluorescent and phosphorescent devices of all colors, including red, green, blue, and white colors. The phenylcarbazole-based compound is synthesized by reacting carbazole with diamine. The organic electroluminescent device manufactured using the phenylcarbazole-based compound has high efficiency, low voltage, high luminance, and a long lifespan. Thus, e.g., coupling of N,N'-diphenylbenzidine (preparation given) with 3-iodo-N-phenylcarbazole (preparation given) afforded target compound 1 = I (X = 1,1'-biphenyl-4,4'-diyl; all R groups = H; Ar = Ph; 70%); an organic electroluminescent device comprising ITO anode/target compound 1 (HIL, 600°); NPB (HTL, 300Å); codeposited IDE140 (blue fluorescent host) + IDE105 (blue fluorescent dopant) (weight ratio 98:2, EML, 200Å); Alq3 (ETL, 300Å); LiF (EIL, 10Å); and Al (cathode, 3000 Å) exhibited a driving voltage of 7.1 V, luminance of 3214 cd/m2, color coordination (0.14, 0.15), and luminous efficiency of 6.43 cd/A at c.d. of 50 mA/cm2 vs. driving voltage of 8.0 V, luminance of 3024 cd/m2, color coordination (0.14, 0.15), and luminous efficiency of 6.05 cd/A at c.d. of 50 mA/cm2 for the comparative device in which IDE 406 was used instead of target compound 1 for the HIL.

IT 887403-00-1 887403-01-2 887403-02-3
887403-03-4 887403-04-5 887403-05-6
887403-06-7 887403-07-8 887403-08-9
887403-09-0 887403-10-3 887403-11-4
887403-12-5 887403-13-6 887403-14-7
887403-15-8

RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device employing phenylcarbazole-based compds. and the preparation thereof)

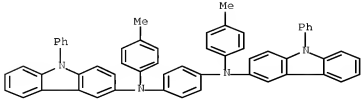
RN 887403-00-1 CAPLUS

CN 1,4-Benzenediamine, N1,N4-diphenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

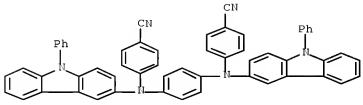


RN 887403-01-2 CAPLUS

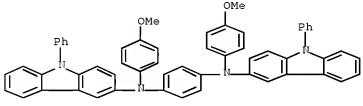
CN 1,4-Benzenediamine, N1,N4-bis(4-methylphenyl)-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



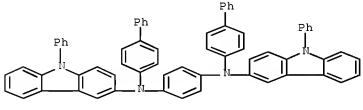
RN 887403-02-3 CAPLUS
CN Benzonitrile, 4,4'-[1,4-phenylenebis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



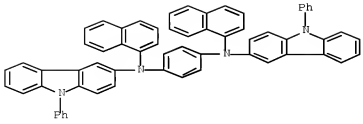
RN 887403-03-4 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis(4-methoxyphenyl)-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



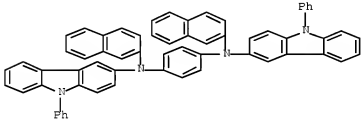
RN 887403-04-5 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis([1,1'-biphenyl]-4-yl)-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



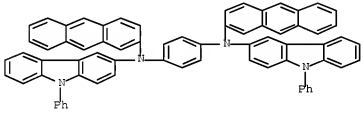
RN 887403-05-6 CAPLUS
CN 1,4-Benzenediamine, N1,N4-di-1-naphthalenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



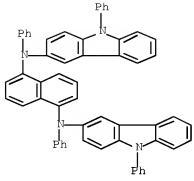
RN 887403-06-7 CAPLUS
CN 1,4-Benzenediamine, N1,N4-di-2-naphthalenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



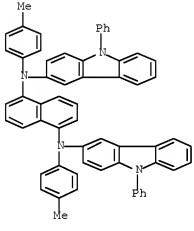
RN 887403-07-8 CAPLUS
CN 1,4-Benzenediamine, N1,N4-di-2-anthracenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



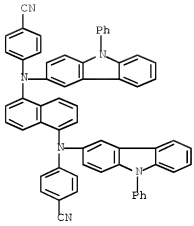
RN 887403-08-9 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-diphenyl-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



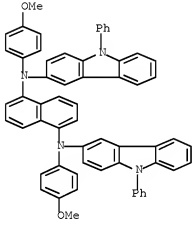
RN 887403-09-0 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis(4-methylphenyl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



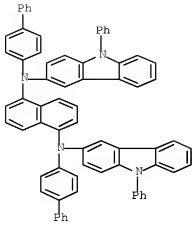
RN 887403-10-3 CAPLUS
CN Benzonitrile, 4,4'-[1,5-naphthalenediylbis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



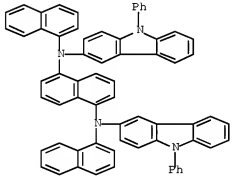
RN 887403-11-4 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis(4-methoxyphenyl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



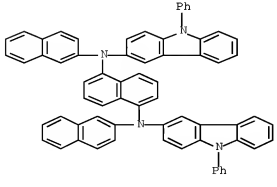
RN 887403-12-5 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis([1,1'-biphenyl]-4-yl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



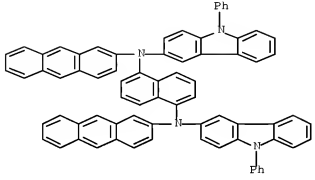
RN 887403-13-6 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-di-1-naphthalenyl-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 887403-14-7 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-di-2-naphthalenyl-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 887403-15-8 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-di-2-anthracenyl-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

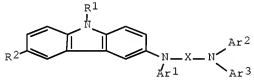
L3 ANSWER 39 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2006:380901 CAPLUS Full-text
DOCUMENT NUMBER: 144:422228
TITLE: Carbazole derivative, and light emitting element and light emitting device using the carbazole derivative
INVENTOR(S): Nakashima, Harue; Kawakami, Sachiko; Kumaki, Daisuke
PATENT ASSIGNEE(S): Semiconductor Energy Laboratory Co., Ltd., Japan
SOURCE: PCT Int. Appl., 142 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006043647	A1	20060427	WO 2005-JP19349	20051014
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1805140	A1	20070711	EP 2005-795774	20051014

R: DE, FI, FR, GB, NL

CN 101039909	A	20070919	CN 2005-80035385		20051014
CN 101039909	B	20110420			
CN 102153502	A	20110817	CN 2011-10037442		20051014
JP 2006298895	A	20061102	JP 2005-303732		20051018
US 20080284328	A1	20081120	US 2006-583028		20060615
US 7901791	B2	20110308			
US 20110147730	A1	20110623	US 2011-37392		20110301
PRIORITY APPLN. INFO.:			JP 2004-304225	A	20041019
			JP 2004-333344	A	20041117
			JP 2005-84533	A	20050323
			CN 2005-80035385	A3	20051014
			WO 2005-JP19349	W	20051014
			US 2006-583028	A1	20060615

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 144:422228
GI

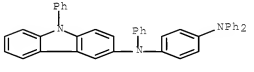


I

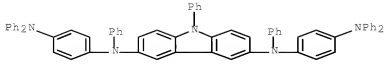
AB The title carbazole derivs. are described by the general formula I (R1 = H, C1-6 alkyl, C6-25 aryl, C5-9 heteroaryl, arylalkyl, or C1-7 acyl; R2 = H, C1-6 alkyl, or -N(Ar4)-Y-N(Ar5)Ar6; Ar1-6 = independently selected C6-25 aryl and/or C5-9 heteroaryl; and X and Y = independently selected C6-25 bivalent aromatic hydrocarbon and/or C5-10 bivalent heterocyclic group). Light-emitting elements incorporating the derivs., devices (e.g., displays) incorporating the elements, and electronic apparatus employing the elements, are also described.

IT 884510-64-9P 884510-65-0P 884510-66-1P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(carbazole derivative, and light emitting element and light emitting device using carbazole derivative)

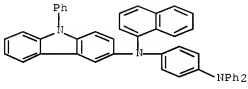
RN 884510-64-9 CAPLUS
CN 1,4-Benzenediamine, N1,N1,N4-triphenyl-N4-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



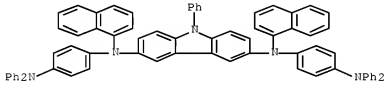
RN 884510-65-0 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6,9-triphenyl- (CA INDEX NAME)



RN 884510-66-1 CAPLUS
CN 1,4-Benzenediamine, N1-1-naphthalenyl-N4,N4-diphenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



IT 884510-67-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(carbazole derivative, and light emitting element and light emitting device using carbazole derivative)
RN 884510-67-2 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-N3,N6-di-1-naphthalenyl-9-phenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (10 CITINGS)
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 40 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2006:79285 CAPLUS Full-text
DOCUMENT NUMBER: 144:159926
TITLE: Phenylcarbazole compounds and organic electroluminescence devices using the same
INVENTOR(S): Hwang, Seok-Hwan; Lee, Seok-Jong; Kim, Young-Kook; Yang, Seung-Gak; Kim, Hee-Yeon; Lee, Chang-Ho
PATENT ASSIGNEE(S): Samsung SDI Co., Ltd., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 22 pp.
CODEN: USXXCO

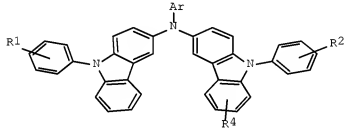
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060020136	A1	20060126	US 2005-181706	20050713
US 7431997	B2	20081007		
KR 2006005755	A	20060118	KR 2004-54700	20040714
JP 2006028176	A	20060202	JP 2005-198787	20050707
JP 4458361	B2	20100428		
CN 1763006	A	20060426	CN 2005-10116009	20050714
CN 1763006	B	20100908		
US 20070231503	A1	20071004	US 2007-806039	20070529

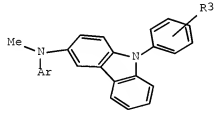
PRIORITY APPLN. INFO.:

KR 2004-54700	A	20040714
KR 2004-22877	A	20040402
KR 2004-98747	A	20041129
US 2005-97182	A2	20050404
US 2005-181706	A2	20050713
US 2005-286421	A2	20051125
KR 2006-48306	A	20060529

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 144:159926
GI



I



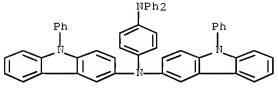
II

AB Phenylcarbazole compds. are described by the general formula I (R1 and R2 = independently selected monosubstituted or polysubstituted groups selected from H, (un)substituted C1-30 alkyl, (un)substituted C6-30 aryl, (un)substituted C4-30 heterocyclic, and (un)substituted C6-30 condensed polycyclic groups, wherein groups adjacent to R1 and R2 can bind and form an (un)saturated cyclic hydrocarbon group; Ar = (un)substituted C6-30 aryl or C6-30 heteroaryl group; R4 = H or II; R3 = a monosubstituted or polysubstituted functional group selected from H, (un)substituted C1-30 alkyl, (un)substituted C6-30 aryl, (un)substituted C4-30 heterocyclic, and (un)substituted C6-30 condensed

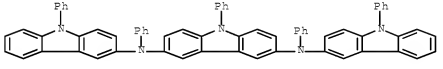
polycyclic groups; and Ar = (un)substituted C6-30 aryl or C6-30 heteroaryl group). Organic electroluminescent devices with. organic layers incorporating the compds. are also described.

IT 873793-68-1 873793-75-0 873793-77-2
873793-78-3 873793-79-4 873793-80-7
873793-81-8 873793-82-9 873793-83-0
RL: DEV (Device component use); USES (Uses)
(phenylcarbazole compds. and organic electroluminescent devices using them)

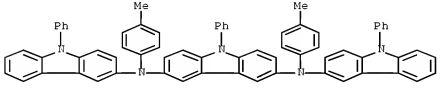
RN 873793-68-1 CAPLUS
CN 1,4-Benzenediamine, N1,N1-diphenyl-N4,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



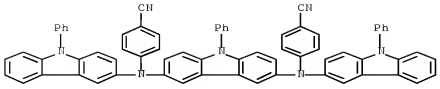
RN 873793-75-0 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6,9-triphenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



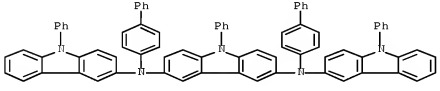
RN 873793-77-2 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-methylphenyl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



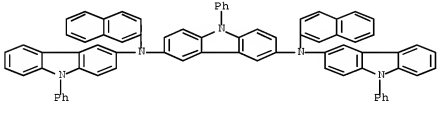
RN 873793-78-3 CAPLUS
CN Benzonitrile, 4,4'-[(9-phenyl-9H-carbazole-3,6-diyl)bis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



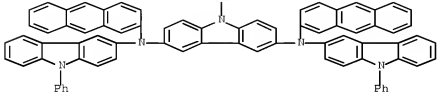
RN 873793-79-4 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis([1,1'-biphenyl]-4-yl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 873793-80-7 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-di-2-naphthalenyl-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

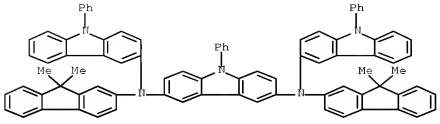


RN 873793-81-8 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-di-2-anthracenyl-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

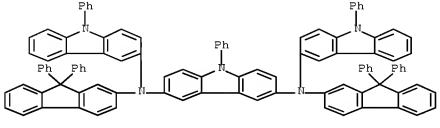


RN 873793-82-9 CAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis(9,9-dimethyl-9H-fluoren-2-yl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 873793-83-0 CAPLUS
CN 9H-Carbazole-3,6-diamine, N,N'-bis(9,9-diphenyl-9H-fluoren-2-yl)-9-phenyl-N,N'-bis(9-phenyl-9H-carbazol-3-yl)- (9CI) (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 41 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2005:1077993 CAPLUS Full-text
DOCUMENT NUMBER: 143:376607
TITLE: Fluorene-based compound and organic electroluminescent display device using the same
INVENTOR(S): Hwang, Seok-Hwan; Lee, Seok-Jong; Kim, Young-Kook; Yang, Seung-Gak; Kim, Hee-Yeon
PATENT ASSIGNEE(S): Samsung Mobile Display Co., Ltd., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 31 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050221124	A1	20051006	US 2005-97182	20050404
US 7737627	B2	20100615		
KR 2005097670	A	20051010	KR 2004-22877	20040402
JP 2005290000	A	20051020	JP 2005-106551	20050401

JP 4347831	B2	20091021			
CN 1702065	A	20051130	CN 2005-10069765		20050401
US 20070231503	A1	20071004	US 2007-806039		20070529
PRIORITY APPLN. INFO.:			KR 2004-22877	A	20040402
			KR 2004-54700	A	20040714
			KR 2004-98747	A	20041129
			US 2005-97182	A2	20050404
			US 2005-181706	A2	20050713
			US 2005-286421	A2	20051125
			KR 2006-48306	A	20060529

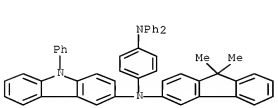
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 143:376607
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

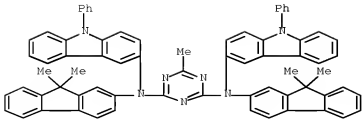
AB A fluorene-based compound represented by the general formula I where Z is represented by the general formula II, III, and IV, where Ar is a substituted or unsubstituted aryl group or a group by the general formula V (X = N, B or P; Y = a single bond, a (un)substituted C1-C30 alkylene group, a (un)substituted C6-C30 arylene group, a (un)substituted C4-C30 heterocyclic group; R1, R2, R3 = H, (un)substituted C1-C30 alkyl group, a (un)substituted C6-C30 aryl group, a (un)substituted C4-C30 heterocyclic group, a (un)substituted C6-C30 condensed polycyclic group, where neighboring groups among R1, R2 and R3 are connected to each other to form a (un)saturated carbon ring; R', R'' = H, a hydroxy group, a (un)substituted C1-C30 alkyl group, a (un)substituted C6-C30 aryl group) is described. An organic electroluminescent display device comprising two electrodes; and an organic layer interposed between the electrodes, wherein the organic layer comprises the fluorene-based compound is also described.

IT 866119-23-5P 866119-44-0P 866119-45-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorene-based compound and organic electroluminescent display device using the same)

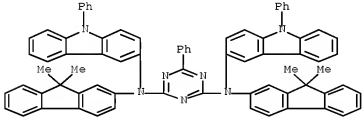
RN 866119-23-5 CAPLUS
CN 1,4-Benzenediamine, N1-(9,9-dimethyl-9H-fluoren-3-yl)-N4,N4-diphenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 866119-44-0 CAPLUS
CN 1,3,5-Triazine-2,4-diamine, N2,N4-bis(9,9-dimethyl-9H-fluoren-2-yl)-6-methyl-N2,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 866119-45-1 CAPLUS
CN 1,3,5-Triazine-2,4-diamine, N2,N4-bis(9,9-dimethyl-9H-fluoren-2-yl)-6-phenyl-N2,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 7 THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

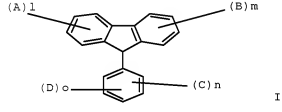
L3 ANSWER 42 OF 42 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2005:1042363 CAPLUS Full-text
DOCUMENT NUMBER: 143:356288
TITLE: Phenyl carbazole derivatives and organic electroluminescent devices using the same
INVENTOR(S): Kim, Ji-Eun; Lee, Jae-Chol; Kim, Kong-Kyeom; Bae, Jae-Soon; Jang, Jun-Gi; Jeon, Sang-Young; Kang, Min-Soo; Cho, Wook-Dong; Jeon, Byung-Sun; Kim, Yeon-Hwan
PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
SOURCE: PCT Int. Appl., 126 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005090512	A1	20050929	WO 2005-KR794	20050318
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,				

TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

KR 2005118098	A	20051215	KR 2004-116388		20041230
US 20050225235	A1	20051013	US 2005-83360		20050318
KR 2006044424	A	20060516	KR 2005-22762		20050318
EP 1725632	A1	20061129	EP 2005-733437		20050318
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR					
CN 1906268	A	20070131	CN 2005-80001667		20050318
JP 2007520470	T	20070726	JP 2006-546860		20050318
TW 294454	B	20080311	TW 2005-108390		20050318
IN 2006KN01638	A	20070511	IN 2006-KN1638		20060613
JP 2011068659	A	20110407	JP 2010-256233		20101116
PRIORITY APPLN. INFO.:			KR 2004-18877	A	20040319
			KR 2004-116388	A	20041230
			JP 2006-546860	A3	20050318
			WO 2005-KR794	W	20050318

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 143:356288
GI



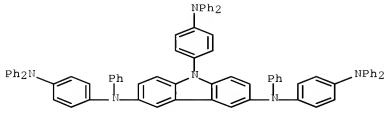
I

AB N-Ph carbazole derivs. are claimed which are described by the general formula I (A = -R1N(R2)-, or -R1N(R2)-Ar-; B = -R3N(R4)-, or -R3N(R4)-Ar-; C = -R5N(R6)-, or -R5N(R6)-Ar-; D = H, -R7N(R8)-, or -R9N(R10)-Ar-; R1-10 = independently selected group each comprising only once or repeatedly ≥2 times, ≥1 of H, C1-20 aliphatic hydrocarbon, aromatic hydrocarbon unsubstituted or substituted with a nitro, nitrile, halogen, alkyl, alkoxy, or amino group, silicon group having an aromatic substituent; heterocyclic aromatic hydrocarbon unsubstituted or substituted with a nitro, nitrile, halogen, alkyl, alkoxy or amino group, thiophene group substituted with a C1-20 hydrocarbon or C6-24 aromatic hydrocarbon; and a boron group substituted with an aromatic hydrocarbon; Ar = an aromatic hydrocarbon unsubstituted or substituted with a nitro, nitrile, halogen, alkyl, alkoxy, or amino group; and l ≥ 1; m ≥ 1; n ≥ 1; and o ≥ 0; with the restriction that the compound represented by formula I wherein R1-6 = H simultaneously and D also = H is excluded). Organic electroluminescent devices using the compds., especially in hole-injecting, hole-transporting, or light-emitting layers, are also described.

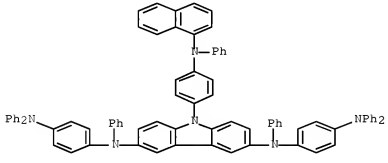
IT 865596-39-0 865596-40-3
RL: DEV (Device component use); USES (Uses)
(Ph carbazole derivs. and organic electroluminescent devices using them)

RN 865596-39-0 CAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6,9-tris[4-(diphenylamino)phenyl]-N3,N6-diphenyl- (CA INDEX NAME)



RN 865596-40-3 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis[4-(diphenylamino)phenyl]-9-[4-(1-naphthalenylphenylamino)phenyl]-N3,N6-diphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (30 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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Uploading C:\Program Files\STNEXP\Queries\10584308\2.str

chain nodes :

15 17 18 19 21 22 23 24
ring nodes :
1 2 3 4 5 6 7 8 9 10 11 12 13
chain bonds :
1-24 12-15 15-17 15-19 17-18 18-21 18-22
ring bonds :
1-2 1-5 2-3 2-10 3-4 3-13 4-5 4-6 5-9 6-7 7-8 8-9 10-11 11-12 12-13

exact/norm bonds :
1-2 1-5 12-15 15-17 15-19 17-18 18-21 18-22
exact bonds :
1-24 3-4
normalized bonds :
2-3 2-10 3-13 4-5 4-6 5-9 6-7 7-8 8-9 10-11 11-12 12-13
isolated ring systems :
containing 1 :

G1:Cb,Hy

Match level :
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 15:CLASS 17:CLASS 18:CLASS 19:CLASS 21:CLASS
22:CLASS 23:CLASS 24:Atom

L4 STRUCTURE UPLOADED

=> s l4 sss full
REGistRY INITIATED
Substance data SEARCH and crossover from CAS REGISTRY in progress...
Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

FULL SEARCH INITIATED 11:39:08 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 21741 TO ITERATE

100.0% PROCESSED 21741 ITERATIONS 105 ANSWERS
SEARCH TIME: 00.00.01

L5 105 SEA SSS FUL L4

L6 20 L5

=> file registry

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.52	647.79

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-36.54

FILE 'REGISTRY' ENTERED AT 11:39:15 ON 09 SEP 2011
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STRUCTURE FILE UPDATES: 8 SEP 2011 HIGHEST RN 1330234-06-4
DICTIONARY FILE UPDATES: 8 SEP 2011 HIGHEST RN 1330234-06-4

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http://www.cas.org/legal/infopolicy.html

TSCA INFORMATION NOW CURRENT THROUGH June 24, 2011.

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predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> s l4 sss full
FULL SEARCH INITIATED 11:39:18 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 21741 TO ITERATE

100.0% PROCESSED 21741 ITERATIONS 105 ANSWERS
SEARCH TIME: 00.00.01

L7 105 SEA SSS FUL L4

=> file caplus
COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 196.86 844.65

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE ENTRY TOTAL SESSION
CA SUBSCRIBER PRICE 0.00 -36.54

FILE 'CAPLUS' ENTERED AT 11:39:22 ON 09 SEP 2011
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FILE COVERS 1907 - 9 Sep 2011 VOL 155 ISS 12
FILE LAST UPDATED: 8 Sep 2011 (20110908/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Jun 2011
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Jun 2011

CAplus now includes complete International Patent Classification (IPC) reclassification data for the second quarter of 2011.

CAS Information Use Policies apply and are available at:

http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

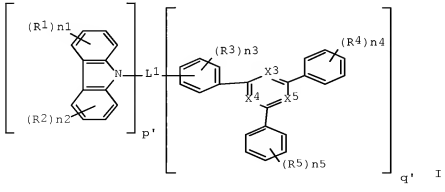
=> s l7
L8 20 L7

=> d l8 ibib abs hitstr 1-
YOU HAVE REQUESTED DATA FROM 20 ANSWERS - CONTINUE? Y/(N):y

L8 ANSWER 1 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:958583 CAPLUS Full-text
DOCUMENT NUMBER: 155:256594
TITLE: Organic electroluminescent device
INVENTOR(S): Masui, Kensuke; Kinoshita, Masaji; Ise, Toshihiro
PATENT ASSIGNEE(S): Fuji Photo Film Co., Ltd., Japan
SOURCE: Jpn. Tokkyo Koho, 77pp.
CODEN: JTXXFF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 4741028	B1	20110803	JP 2010-157352	20100709

PRIORITY APPLN. INFO.: JP 2010-157352 20100709
GI



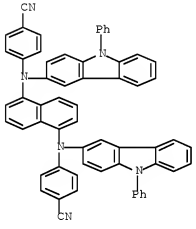
I

AB The invention refers to an organic electroluminescent device comprising a compound I [X3-5 = N, or methylene; and the ring containing X3-5 is a pyridine or pyrimidine; L = single bond or benzene; R1-5 = F, Me, Ph, cyano, pyridyl, pyrimidyl, silyl, carbazolyl, or tert-butyl; n1 – n5 = 0 or 1; p' = 1 or 2; q = 1] in at least one layer of the organic layer between the light emitting layer and the cathode, and a carbazole subst. biphenylamine in at least one layer of the organic layer between the light emitting layer and the anode.

IT 887403-10-3
RL: TEM (Technical or engineered material use); USES (Uses)
(organic electroluminescent device)

RN 887403-10-3 CAPLUS

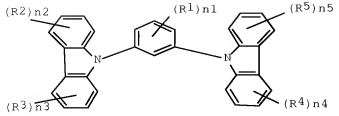
CN Benzonitrile, 4,4'-[1,5-naphthalenediylbis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



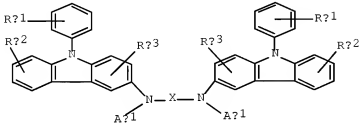
L8 ANSWER 2 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:900500 CAPLUS Full-text
DOCUMENT NUMBER: 155:226958
TITLE: Organic electroluminescent device
INVENTOR(S): Kinoshita, Masaji; Ise, Toshihiro
PATENT ASSIGNEE(S): Fujifilm Corp., Japan
SOURCE: Jpn. Tokkyo Koho, 82pp.
CODEN: JTXXFF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 4729641	B1	20110720	JP 2010-153498	20100705
PRIORITY APPLN. INFO.:			JP 2010-153498	20100705

GI



I



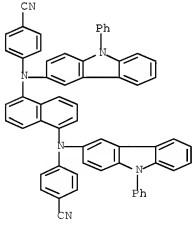
II

AB The invention relates to an organic electroluminescent device, comprising: an electroluminescent layer containing a substance represented by I [R1 = alkyl, aryl, and not including carbazolyl and perfluoroalkyl; R2–R5 = alkyl, aryl, silyl, cyano, and F; n1 = 1–4 integer; n2–n5 = 0–4 integer]; and an organic layer disposed between the electroluminescent layer and an anode, containing a substance represented by II [X = arylene, divalent pyridyl, and divalent thienyl; RH1, RH1', RH2, and RH2' = H, halo, alkyl, aryl, pyridyl, and cyano; AH1 and AH1' =aryl and pyridyl].

IT 887403-10-3
RL: TEM (Technical or engineered material use); USES (Uses)
(hole injection material; organic electroluminescent device)

RN 887403-10-3 CAPLUS

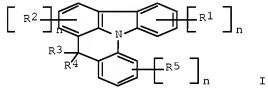
CN Benzonitrile, 4,4'-[1,5-naphthalenediylbis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



L8 ANSWER 3 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:775014 CAPLUS Full-text
DOCUMENT NUMBER: 155:167933
TITLE: Indoloacridine derivative as an electroluminescent host material for organic electronic element
INVENTOR(S): Park, Jeong Hwan; Kim, Dae Seong; Park, Yong Uk; Kim, Gi Won; Jung, Hwa Sun; Kim, Won Sam; Byun, Ji Hun; Choi, Dae Hyeok; Kim, Dong Ha
PATENT ASSIGNEE(S): Duksan Hi-Metal Co., Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 47pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 20110066763	A	20110617	KR 2009-123541	20091211
PRIORITY APPLN. INFO.:			KR 2009-123541	20091211

OTHER SOURCE(S): MARPAT 155:167933
GI

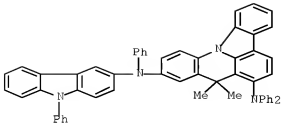


I

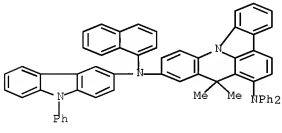
AB The title compound containing indoloacridine is shown in chemical formula I, wherein, R1 and R2 are H, substituted or unsubstituted C1-50 alkyl, substituted or unsubstituted C1-50 alkoxy, substituted or unsubstituted C1-50 alkenyl, or substituted or unsubstituted C5-60 arylene groups; R3-R5 are H, halogen, cyano, alkoxy or thiol groups; X is S, O or Si; n1 and n2 are 0-4 integers; n3 is a 0-3 integer.

IT 1313415-47-2 1313415-48-3 1313415-49-4
1313415-50-7 1313415-67-6 1313415-68-7
1313415-69-8 1313415-70-1
RL: TEM (Technical or engineered material use); USES (Uses)
(indoloacridine derivative as an electroluminescent host material for organic
electronic element)

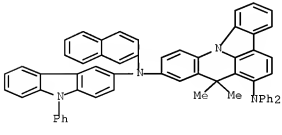
RN 1313415-47-2 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-7,10-diamine, 8,8-dimethyl-N7,N7,N10-triphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



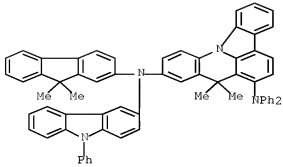
RN 1313415-48-3 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-7,10-diamine,
8,8-dimethyl-N10-1-naphthalenyl-N7,N7-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



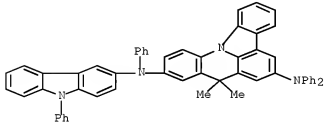
RN 1313415-49-4 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-7,10-diamine,
8,8-dimethyl-N10-2-naphthalenyl-N7,N7-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



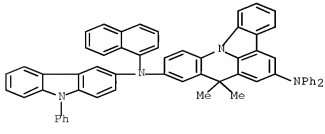
RN 1313415-50-7 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-7,10-diamine,
N10-(9,9-dimethyl-9H-fluoren-2-yl)-8,8-dimethyl-N7,N7-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



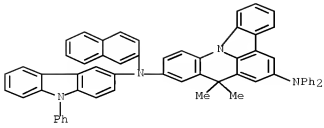
RN 1313415-67-6 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-6,10-diamine, 8,8-dimethyl-N6,N6,N10-triphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



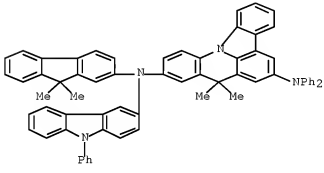
RN 1313415-68-7 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-6,10-diamine, 8,8-dimethyl-N10-1-naphthalenyl-N6,N6-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 1313415-69-8 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-6,10-diamine, 8,8-dimethyl-N10-2-naphthalenyl-N6,N6-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



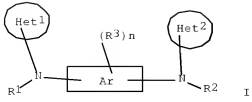
RN 1313415-70-1 CAPLUS
CN 8H-Indolo[3,2,1-de]acridine-6,10-diamine, N10-(9,9-dimethyl-9H-fluoren-2-yl)-8,8-dimethyl-N6,N6-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



L8 ANSWER 4 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:695780 CAPLUS Full-text
DOCUMENT NUMBER: 155:79444
TITLE: Heteroaryl amine compound as an electroluminescent material for organic light-emitting diode
INVENTOR(S): Je, Jong Tae; Jung, Seong Uk; Kim, Nam I.; Lee, Sang Hae
PATENT ASSIGNEE(S): SFC Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 90pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2011057078	A	20110531	KR 2010-116234	20101122
PRIORITY APPLN. INFO.:			KR 2009-113298 A	20091123
OTHER SOURCE(S):	MARPAT 155:79444			

GI

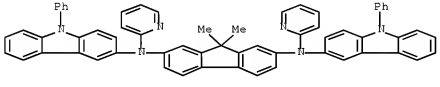


I

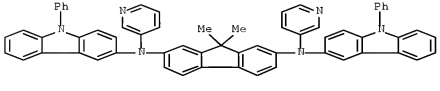
AB The title heteroaryl amine compound is shown in chemical formula I (Ar = substituted/unsubstituted biphenyl, substituted/unsubstituted fluorenyl, or substituted/unsubstituted tetrahydro pyrenyl; R1, R2 and R3 = H, D, halogen, cyano, substituted/unsubstituted C1-20 alkyl, substituted/unsubstituted C6-40 aryl, substituted/unsubstituted C3-20 heteroaryl, germanium group, boron group, substituted/unsubstituted C1-24 alkyl silyl, or substituted/unsubstituted C6-40 aryl silyl; n = integer of 0-20; if n is larger than 2, several R3 can be identical or different; Het1 and Het2 = substituted/unsubstituted C3-20 heteroaryl; Het1 and Het2 contain at least one N, resp.). The title organic light-emitting diode can be driven at low voltage, and has good brightness.

IT 1311307-31-9 1311307-63-7 1311307-95-5
RL: TEM (Technical or engineered material use); USES (Uses)
(heteroaryl amine compound as an electroluminescent material for organic light-emitting diode)

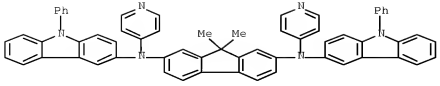
RN 1311307-31-9 CAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-dimethyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-N2,N7-di-2-pyridinyl- (CA INDEX NAME)



RN 1311307-63-7 CAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-dimethyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-N2,N7-di-3-pyridinyl- (CA INDEX NAME)



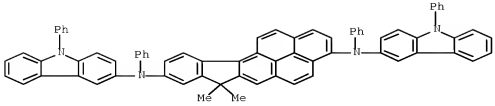
RN 1311307-95-5 CAPLUS
CN 9H-Fluorene-2,7-diamine, 9,9-dimethyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)-N2,N7-di-4-pyridinyl- (CA INDEX NAME)



L8 ANSWER 5 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:457230 CAPLUS Full-text
DOCUMENT NUMBER: 154:472555
TITLE: Condensed-cyclic compound and organic light emitting diode including organic layer containing the condensed-cyclic compound
INVENTOR(S): Kim, Hee-Yeon; Yang, Seung-Gak; Lee, Kwan-Hee
PATENT ASSIGNEE(S): Samsung Mobile Display Co., Ltd., S. Korea
SOURCE: Eur. Pat. Appl., 47pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 2308843	A1	20110413	EP 2010-181070	20100928
R: AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, BA, ME, RS				
KR 2011039108	A	20110415	KR 2009-96393	20091009
US 20110084256	A1	20110414	US 2010-895732	20100930
JP 2011079822	A	20110421	JP 2010-225742	20101005
CN 102040589	A	20110504	CN 2010-10503420	20101009

PRIORITY APPLN. INFO.: KR 2009-96393 A 20091009
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 154:472555
AB The present invention provides a condensed-cyclic 7H-indeno[1,2-a]pyrene derivative and an organic light emitting diode including a 7H-indeno[1,2-a]pyrene derivative
IT 1288952-41-9P
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)
(condensed-cyclic compound and organic LEDs)
RN 1288952-41-9 CAPLUS
CN 7H-Indeno[1,2-a]pyrene-3,9-diamine, 7,7-dimethyl-N3,N9-diphenyl-N3,N9-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

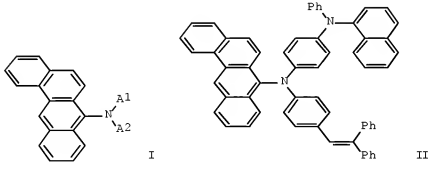


REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2011:371406 CAPLUS Full-text
DOCUMENT NUMBER: 154:384962
TITLE: preparation of 1,2-benzo[a]anthracene derivatives as organic electroluminescent materials
INVENTOR(S): Qiu, Yong; Li, Jianren; Li, Yinkui
PATENT ASSIGNEE(S): Beijing Visionox Technology Co., Ltd., Peop. Rep. China; Kunshan Visionox Display Technology Co., Ltd.
SOURCE: Faming Zhuanli Shenqing, 89pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 101987822	A	20110323	CN 2009-10090379	20090807
PRIORITY APPLN. INFO.:			CN 2009-10090379	20090807

OTHER SOURCE(S): MARPAT 154:384962
GI



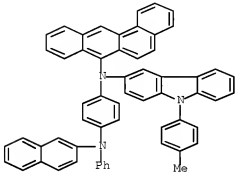
I II

AB The invention provides a process for preparation of 1,2-benzo[a]anthracene derivs. I [wherein A1 and A2 = independently (un)substituted aryl] as materials for organic electroluminescent materials (OLEDs). For example, II was prepared in a multi-step synthesis. OLED containing II showed low driving voltage of 6.72 V and high luminous efficiency of 9.57 lm/W.

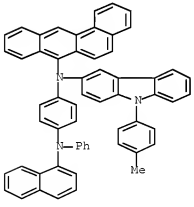
IT 1279122-33-6P 1279122-35-8P 1279122-37-0P

1279122-41-6P 1279122-63-2P 1279122-64-3P
1279122-65-4P 1279122-66-5P 1279122-67-6P
1279122-69-8P 1279122-70-1P 1279122-72-3P
1279122-73-4P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of 1,2-benzo[a]anthracene derivs. as organic electroluminescent materials)

RN 1279122-33-6 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]-N4-2-naphthalenyl-N4-phenyl- (CA INDEX NAME)



RN 1279122-35-8 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]-N4-1-naphthalenyl-N4-phenyl- (CA INDEX NAME)



RN 1279122-37-0 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]-N4,N4-di-2-naphthalenyl- (CA INDEX NAME)

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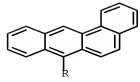

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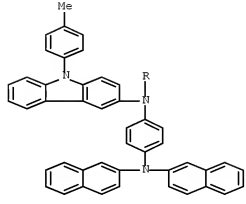
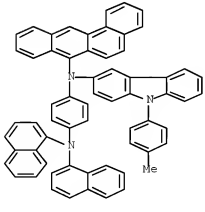
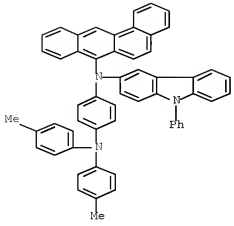


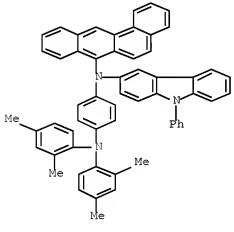
RN 1279122-41-6 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]-N4,N4-di-1-naphthalenyl- (CA INDEX NAME)



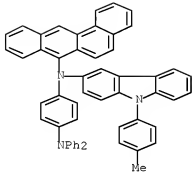
RN 1279122-63-2 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(4-methylphenyl)-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



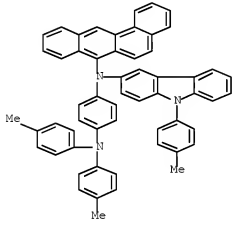
RN 1279122-64-3 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(2,4-dimethylphenyl)-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



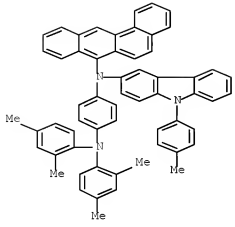
RN 1279122-65-4 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]-N4,N4-diphenyl- (CA INDEX NAME)



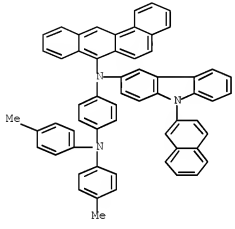
RN 1279122-66-5 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(4-methylphenyl)-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



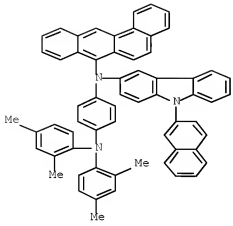
RN 1279122-67-6 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(2,4-dimethylphenyl)-N1-[9-(4-methylphenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



RN 1279122-69-8 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(4-methylphenyl)-N1-[9-(2-naphthalenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



RN 1279122-70-1 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(2,4-dimethylphenyl)-N1-[9-(2-naphthalenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)



RN 1279122-72-3 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(4-methylphenyl)-N1-[9-(1-naphthalenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)

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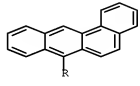
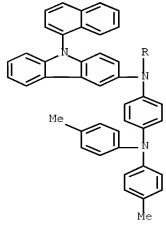
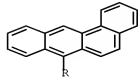


PAGE 2-A

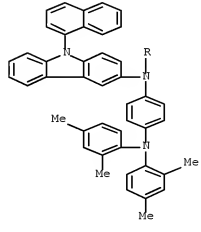


RN 1279122-73-4 CAPLUS
CN 1,4-Benzenediamine, N1-benz[a]anthracen-7-yl-N4,N4-bis(2,4-dimethylphenyl)-N1-[9-(1-naphthalenyl)-9H-carbazol-3-yl]- (CA INDEX NAME)

PAGE 1-A



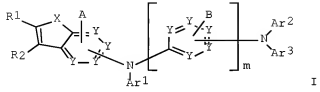
PAGE 2-A



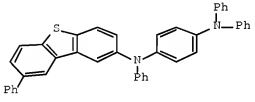
L8 ANSWER 7 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2010:1480875 CAPLUS Full-text
DOCUMENT NUMBER: 154:45886
TITLE: Preparation of arylamino compounds for organic electronic elements
INVENTOR(S): Choi, Dae Hyeok; Kim, Dae Seong; Park, Yong Uk; Jung, Hwa Sun; Kim, Dong Ha; Park, Jeong Hwan
PATENT ASSIGNEE(S): Duksan Hi-Metal Co., Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 32pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

KR 2010123172 A 20101124 KR 2009-42234 20090514
PRIORITY APPLN. INFO.: KR 2009-42234 20090514
OTHER SOURCE(S): MARPAT 154:45886
GI



I



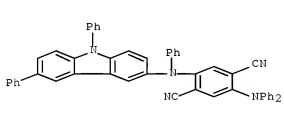
II

AB The title compound I [A = (R3)n; B = (R4)n; R1-R4 = independently H, halogen, cyano, etc.; Ar1-Ar3 = (un)substituted C2-50 alkenyl, (un)substituted C6-50 arylene, (un)substituted C4-60 aryl, etc.; X = N, O, S, P and Si; Y = C, N, O and S; n = 0-4; m = 1-3] was prepared For example, II was prepared in a multistep synthesis. I was claimed useful for organic elec. elements such as OLED, organic solar cell, OPC, organic TFT, etc.

IT 1258015-43-8P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of arylamino compds. for organic electronic elements)

RN 1258015-43-8 CAPLUS

CN 1,4-Benzenedicarbonitrile, 2-(diphenylamino)-5-[(6,9-diphenyl-9H-carbazol-3-yl)phenylamino]- (CA INDEX NAME)

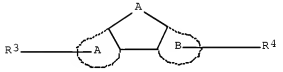


L8 ANSWER 8 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2010:721918 CAPLUS Full-text
DOCUMENT NUMBER: 153:73018
TITLE: Novel organic electroluminescent compounds and organic electroluminescent device using the same
INVENTOR(S): Kim, Chi Sik; Shin, Hyo Nim; Cho, Young Jun; Kwon,

Hyuck Joo; Kim, Bong Ok; Kim, Sung Min; Yoon, Seung Soo
PATENT ASSIGNEE(S): Gracel Display Inc., S. Korea
SOURCE: PCT Int. Appl., 153pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2010064871	A1	20100610	WO 2009-KR7238	20091204
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
KR 2010064712	A	20100615	KR 2008-123276	20081205
EP 2202283	A1	20100630	EP 2009-156605	20090330
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, RS				

PRIORITY APPLN. INFO.: KR 2008-123276 A 20081205
OTHER SOURCE(S): CASREACT 153:73018; MARPAT 153:73018
GI



I

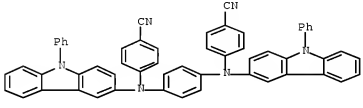
AB Provided are novel organic electroluminescent compds., R1Ar1LAr2R2 [L = I; A = -N(R71)-, -S-, -O-, -Si(R72)(R73)-, -P(R74)-, -C:O-, B(R75)-, -In(R76)-, -Se-, Ge(R77)(R78)-, Sn(R79)(R80)-, or -Ga(R81)-; ring A = monocyclic or polycyclic C6-60 aromatic ring; ring B = anthracene; Ar1,2 = bond, C6-60 arylene, C3-60 heteroarylene, 5- or 6-membered heterocycloalkylene, C3-60 cycloalkylene, C2-60 alkenylene, alkynylene, C1-60 alkyleneoxy, C6-60 aryleneoxy or arylenethio; R1,2 = H, D, halo, C1-60 alkyl, C6-60 aryl, C3-60 heteroaryl, morpholino, thiomorpholino, 5- or 6-membered heterocycloalkyl, C3-60 cycloalkyl, tri(C1-60 alkylsilyl), di(C1-60 alkyl)C6-60arylsilyl, tri(C6-60 arylsilyl), adamantyl, C7-60 bicycloalkyl, C2-60 alkenyl, alkynyl, cyano, amino, mono- or di-C1-60 alkylamino, mono- or di-C6-60arylamino, C6-60ar(C1-60 alkyl), C1-60 alkyloxy, alkylthio, C6-60 aryloxy, arylthio, arylcarbonyl, C1-60 alkoxycarbonyl, alkylcarbonyl, carboxyl, nitro, hydroxyl or substituent] and organic

electroluminescent devices and organic solar cells including the same. The organic electroluminescent compound provides superior luminous efficiency and excellent color purity of the material and life property. Therefore, it may be used to manufacture OLEDs having very good operation life.

IT 887403-02-3
RL: PRPH (Prophetic); TEM (Technical or engineered material use); USES (Uses)
(novel organic electroluminescent compds. and organic electroluminescent device using same)

RN 887403-02-3 CAPLUS

CN Benzonitrile, 4,4'-[1,4-phenylenebis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 9 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER: 2010:474625 CAPLUS Full-text

DOCUMENT NUMBER: 152:453946

TITLE: Preparation of carbazole derivatives for organic electronic device

INVENTOR(S): Lee, Dae-Woong; Hong, Sung-Kil; Park, Tae-Yoon; Kim, Yeon-Hwan; Kim, Seong-So

PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea

SOURCE: PCT Int. Appl., 66pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2010041872	A2	20100415	WO 2009-KR5736	20091008
WO 2010041872	A3	20100722		

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA

KR 2010039815 A 20100416 KR 2009-95542 20091008
EP 2343277 A2 20110713 EP 2009-819379 20091008
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR, AL, BA, RS
US 20110193074 A1 20110811 US 2011-123162 20110407
PRIORITY APPLN. INFO.: KR 2008-98493 A 20081008
WO 2009-KR5736 W 20091008
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 152:453946
GI

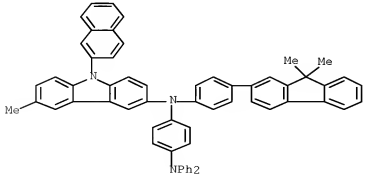
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Disclose are compds. I [l, m, n = 0-5; Y1-Y3 = alkenylene (optionally substituted with halo, alkyl, alkenyl, etc.), arylene (optionally substituted with halo, alkyl, alkenyl, etc.), divalent heterocycle (optionally substituted with halo, alkyl, alkenyl, etc.), etc.; R1, R3, R4 = alkyl (optionally substituted with alkyl, alkenyl, alkoxy, etc.), alkoxy (optionally substituted with halo, alkyl, alkenyl, etc.), alkenyl (optionally substituted with halo, alkyl, alkenyl, etc.), etc.; R2 = alkyl (optionally substituted with alkyl, alkenyl, alkoxy, etc.), alkoxy (optionally substituted with halo, alkyl, alkenyl, etc.), aryl (optionally substituted with halo, alkyl, alkenyl, etc.), etc.; at least one of R3 and R4 contains Q1 moiety; R5-R7 = H, halo, alkyl (optionally substituted with halo, alkyl, alkenyl, etc.), etc.]. For example, II [Q = Q2] was prepared from carbazole via conversion into II [Q = Br] in 3-step process followed by Pd[P(t-Bu)3]2-catalyzed cross-coupling reaction with Q2-H. Electroluminescent device comprising II [Q = Q2] showed 26.63 cd/A with CIE coordinate of (0.316,0.652).

IT 1221237-14-4P 1221237-38-2P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of carbazole derivs. as organic electroluminescent materials)

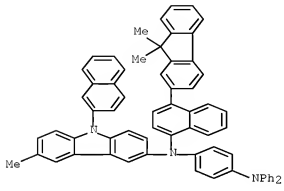
RN 1221237-14-4 CAPLUS

CN 1,4-Benzenediamine, N1-[4-(9,9-dimethyl-9H-fluoren-2-yl)phenyl]-N1-[6-methyl-9-(2-naphthalenyl)-9H-carbazol-3-yl]-N4,N4-diphenyl- (CA INDEX NAME)



RN 1221237-38-2 CAPLUS

CN 1,4-Benzenediamine, N1-[4-(9,9-dimethyl-9H-fluoren-2-yl)-1-naphthalenyl]-N1-[6-methyl-9-(2-naphthalenyl)-9H-carbazol-3-yl]-N4,N4-diphenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L8 ANSWER 10 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2010:131225 CAPLUS Full-text
DOCUMENT NUMBER: 152:238764
TITLE: Preparation of fluorenyl-carbazole derivatives as organic electroluminescent materials
INVENTOR(S): Kim, Dae Seong; Choi, Dae Hyeok; Kim, Dong Ha; Hong, Cheol Gwang; Park, Yong Uk; Park, Jeong Cheol; Nam, Hyeon Guk; Hyun, Ae Ran; Kim, Gi Won; Baek, Jang Yeol; Yoo, Han Seong
PATENT ASSIGNEE(S): Duksan Hi-Metal Co., Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 27pp. CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2010008947	A	20100127	KR 2008-69588	20080717
KR 1026175	B1	20110405		
PRIORITY APPLN. INFO.:			KR 2008-69588	20080717

OTHER SOURCE(S): MARPAT 152:238764
GI

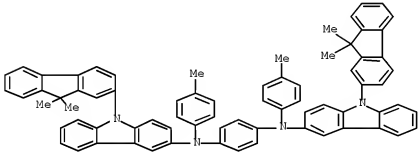
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. I [X = (un)substituted aryl or polycyclic aromatic group; R1-R10 = H, halo, cyano, etc.; Ar = (un)substituted aryl, polycyclic aromatic group or heteroaryl] were prepared For example, bromination of 9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazole followed by Pd2(dba)3-catalyzed coupling reaction with N,N'-diphenylbenzidine afforded compound I [Ar = phenyl; all of R1-R4 =

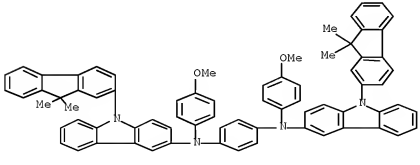
methyl; all of R5-R10 = H; X = Q1] (II). Electroluminescent device comprising ITO, II, NPB, BD-052X, ADN, Alq3, LiF, and Al showed 7.44 cd/A with CIE coordinate of (0.147,0.147).

IT 1207671-88-2P 1207671-89-3P 1207671-91-7P
1207671-92-8P 1207671-93-9P 1207671-94-0P
1207671-95-1P 1207671-97-3P 1207671-99-5P
1207672-00-1P 1207672-01-2P 1207672-03-4P
1207672-04-5P 1207672-05-6P 1207672-06-7P
1207672-08-9P 1207672-10-3P 1207672-12-5P
1207672-15-8P 1207672-16-9P 1207672-17-0P
1207672-18-1P 1207672-19-2P 1207672-20-5P
1207672-22-7P 1207672-23-8P 1207672-24-9P
1207672-25-0P 1207672-26-1P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(claimed compound; preparation of fluorenyl-carbazole derivs. as organic electroluminescent materials)

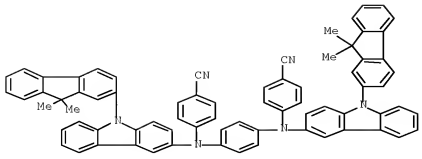
RN 1207671-88-2 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-bis(4-methylphenyl)- (CA INDEX NAME)



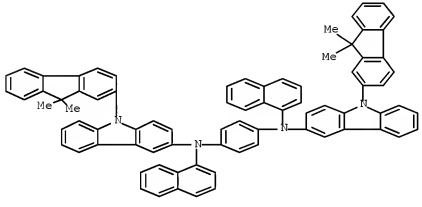
RN 1207671-89-3 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-bis(4-methoxyphenyl)- (CA INDEX NAME)



RN 1207671-91-7 CAPLUS
CN Benzonitrile, 4,4'-[1,4-phenylenebis[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]imino]]bis- (CA INDEX NAME)

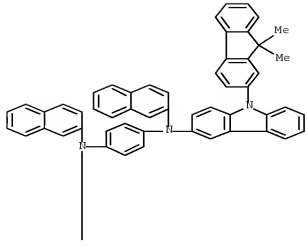


RN 1207671-92-8 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-di-1-naphthalenyl- (CA INDEX NAME)

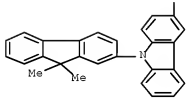


RN 1207671-93-9 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-di-2-naphthalenyl- (CA INDEX NAME)

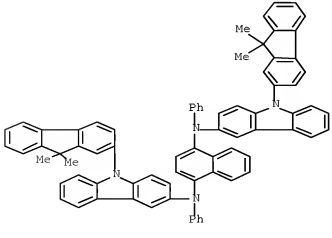
PAGE 1-A



PAGE 2-A

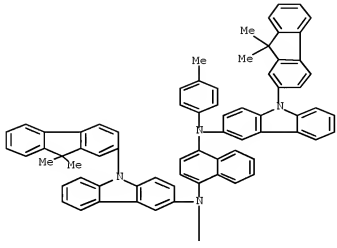


RN 1207671-94-0 CAPLUS
CN 1,4-Naphthalenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-diphenyl- (CA INDEX NAME)



RN 1207671-95-1 CAPLUS
CN 1,4-Naphthalenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-bis(4-methylphenyl)- (CA INDEX NAME)

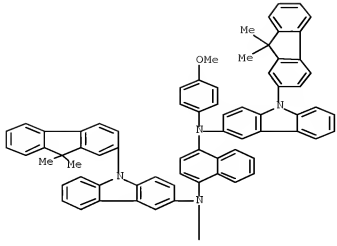
PAGE 1-A



PAGE 2-A

RN 1207671-97-3 CAPLUS
CN 1,4-Naphthalenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-bis(4-methoxyphenyl)- (CA INDEX NAME)

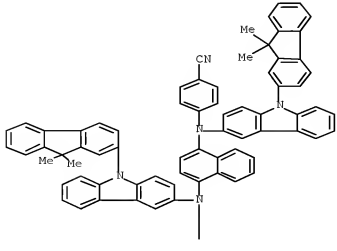
PAGE 1-A



PAGE 2-A

RN 1207671-99-5 CAPLUS
CN Benzonitrile, 4,4'-[1,4-naphthalenediylbis[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]imino]]bis- (CA INDEX NAME)

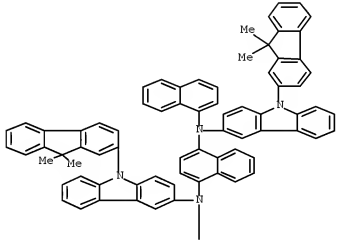
PAGE 1-A



PAGE 2-A

RN 1207672-00-1 CAPLUS
CN 1,4-Naphthalenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-di-1-naphthalenyl- (CA INDEX NAME)

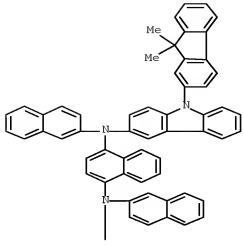
PAGE 1-A



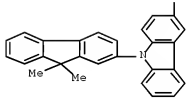
PAGE 2-A

RN 1207672-01-2 CAPLUS
CN 1,4-Naphthalenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-di-2-naphthalenyl- (CA INDEX NAME)

PAGE 1-A

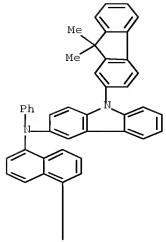


PAGE 2-A



RN 1207672-03-4 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N5-diphenyl- (CA INDEX NAME)

PAGE 1-A



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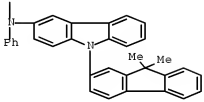

RN 1207672-04-5 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N5-bis(4-methylphenyl)- (CA INDEX NAME)

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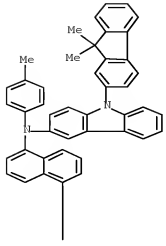

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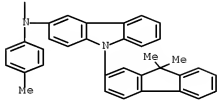

RN 1207672-05-6 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N5-bis(4-methoxyphenyl)- (CA INDEX NAME)

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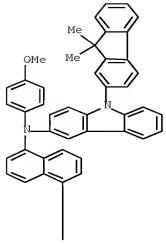

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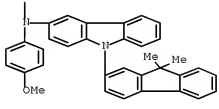

RN 1207672-06-7 CAPLUS
CN Benzonitrile, 4,4'-[1,5-naphthalenediylbis[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]imino]]bis- (CA INDEX NAME)

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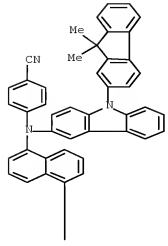

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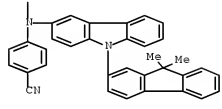

RN 1207672-08-9 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N5-di-1-naphthalenyl- (CA INDEX NAME)

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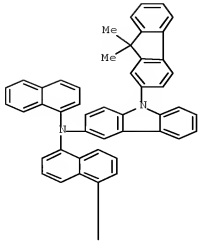

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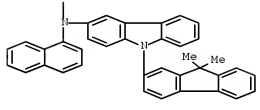

RN 1207672-10-3 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N5-di-2-naphthalenyl- (CA INDEX NAME)

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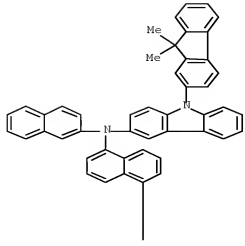

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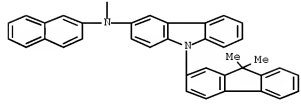
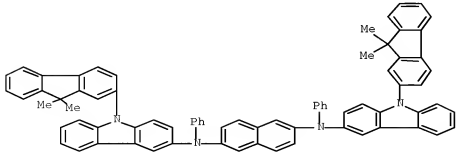
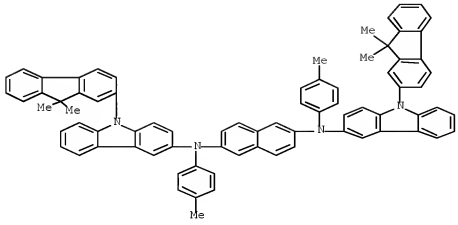


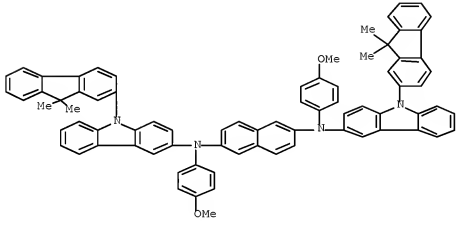
RN 1207672-12-5 CAPLUS
CN 2,6-Naphthalenediamine, N2,N6-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N2,N6-diphenyl- (CA INDEX NAME)



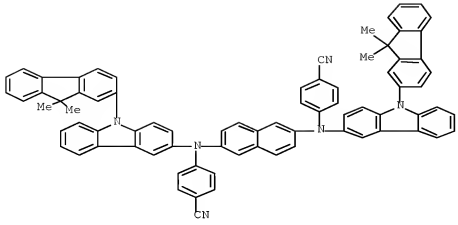
RN 1207672-15-8 CAPLUS
CN 2,6-Naphthalenediamine, N2,N6-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N2,N6-bis(4-methylphenyl)- (CA INDEX NAME)



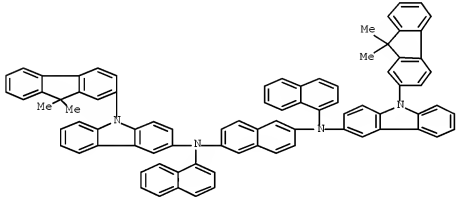
RN 1207672-16-9 CAPLUS
CN 2,6-Naphthalenediamine, N2,N6-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N2,N6-bis(4-methoxyphenyl)- (CA INDEX NAME)



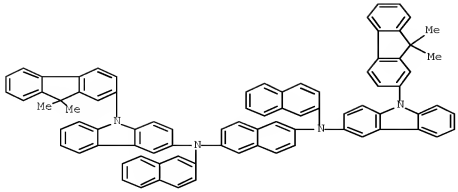
RN 1207672-17-0 CAPLUS
CN Benzonitrile, 4,4'-[2,6-naphthalenediylbis[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]imino]]bis- (CA INDEX NAME)



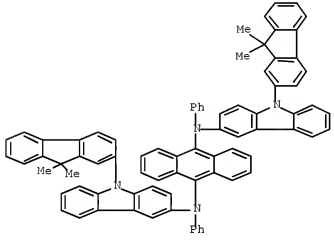
RN 1207672-18-1 CAPLUS
CN 2,6-Naphthalenediamine, N2,N6-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N2,N6-di-1-naphthalenyl- (CA INDEX NAME)



RN 1207672-19-2 CAPLUS
CN 2,6-Naphthalenediamine, N2,N6-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N2,N6-di-2-naphthalenyl- (CA INDEX NAME)



RN 1207672-20-5 CAPLUS
CN 9,10-Anthracenediamine, N9,N10-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N9,N10-diphenyl- (CA INDEX NAME)



RN 1207672-22-7 CAPLUS
CN 9,10-Anthracenediamine, N9,N10-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N9,N10-bis(4-methylphenyl)- (CA INDEX NAME)

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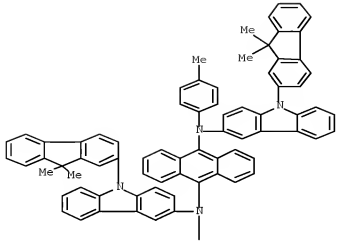

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RN 1207672-23-8 CAPLUS
CN 9,10-Anthracenediamine, N9,N10-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N9,N10-bis(4-methoxyphenyl)- (CA INDEX NAME)

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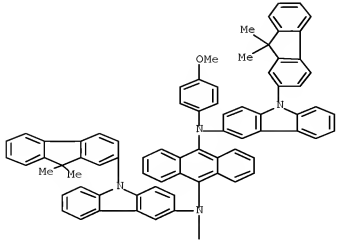

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RN 1207672-24-9 CAPLUS
CN Benzonitrile, 4,4'-[9,10-anthracenediylbis[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]imino]]bis- (CA INDEX NAME)

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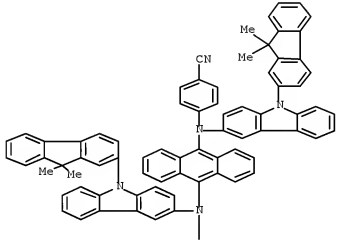

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RN 1207672-25-0 CAPLUS
CN 9,10-Anthracenediamine, N9,N10-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N9,N10-di-1-naphthalenyl- (CA INDEX NAME)

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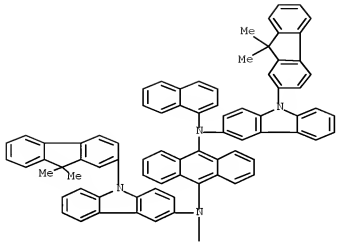

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RN 1207672-26-1 CAPLUS
CN 9,10-Anthracenediamine, N9,N10-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N9,N10-di-2-naphthalenyl- (CA INDEX NAME)

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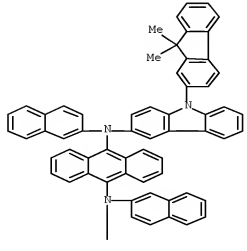
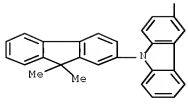
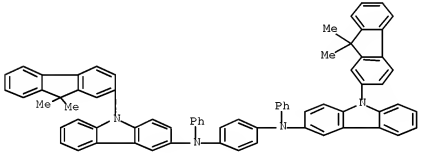




IT 1207671-87-1P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of fluorenyl-carbazole derivs. as organic electroluminescent materials)
RN 1207671-87-1 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazol-3-yl]-N1,N4-diphenyl- (CA INDEX NAME)



L8 ANSWER 11 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2010:83669 CAPLUS Full-text
DOCUMENT NUMBER: 152:250646
TITLE: Organic light-emitting indenofluorene-based compound for organic light-emitting device
INVENTOR(S): Kim, Bok Yeong; Park, No Gil; Ahn, Jung Bok; Jin, Seong Min; Lee, Jae Seong; Si, Sang Man; Han, Geun Hui; Lee, Jae Seon; Lee, Dae Gyun; Kang, Ji Seung; Ahn, Do Hwan; Oh, Min Yeong; Min, Byeong U; Yeo, Sang Wan; Park, Jae Yun; Baek, Do Hyeon; Ha, Min Su; Ahn, Jun Su
PATENT ASSIGNEE(S): Hana Fine Chem Co., Ltd., S. Korea; CSelsolar Co., Ltd.
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 102 pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

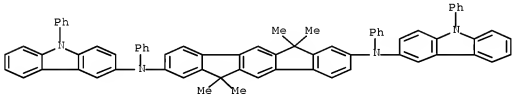
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
KR 2010006072	A	20100118	KR 2008-66243	20080708
KR 1027329	B1	20110411		

PRIORITY APPLN. INFO.: KR 2008-66243 20080708
OTHER SOURCE(S): MARPAT 152:250646

AB The title compound is expressed by chemical formula Ar7Ar8NAr1[Ar2]l[Ar3]m[N(R4)]nAr6, wherein (1) Ar1, Ar2, and Ar3 independently denote substituted or unsubstituted C6-C50 arylene group, or substituted or unsubstituted C2-C50heteroarylene group, (2) Ar4, Ar5, Ar6, and Ar7 independently denote substituted or unsubstituted C1-C5 alkyl, substituted or unsubstituted C6-C50 aryl, or substituted or unsubstituted C2-C50 heteroaryl, (3) l, m, and n independently denote 0 or 1, and (4) when m = 0 and n = 1, Ar1 and Ar2 denote phenylene group, Ar4 and Ar7 denote Ph, and Ar5 and Ar6 denote Me, methylphenyl group or -C6H4-N(C6H5)2. Organic light-emitting devices with excellent luminescence and brightness can be obtained from the compound

IT 1207595-32-1P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(organic light-emitting indenofluorene-based compound for hole injection/transport for organic light-emitting device)

RN 1207595-32-1 CAPLUS
CN Indeno[1,2-b]fluorene-2,8-diamine, 6,12-dihydro-6,6,12,12-tetramethyl-N2,N8-diphenyl-N2,N8-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



L8 ANSWER 12 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2009:1589053 CAPLUS Full-text
DOCUMENT NUMBER: 152:119415
TITLE: Preparation of carbazole derivatives as organic electroluminescent materials
INVENTOR(S): Choi, Dae Hyeok; Kim, Dong Ha; Hong, Cheol Gwang; Kim, Dae Seong; Park, Jeong Cheol; Kim, Gi Won; Hyun, Ae Ran; Baek, Jang Yeol; Park, Yong Uk; Yoo, Han Seong
PATENT ASSIGNEE(S): Duksan Hi-Metal Co., Ltd., S. Korea
SOURCE: Repub. Korean Kongkae Taeho Kongbo, 24pp.
CODEN: KRXXA7
DOCUMENT TYPE: Patent
LANGUAGE: Korean
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

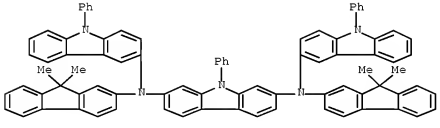
KR 2009129799	A	20091217	KR 2008-55897	20080613
KR 1026173	B1	20110405		
PRIORITY APPLN. INFO.:			KR 2008-55897	20080613
OTHER SOURCE(S):	MARPAT 152:119415			
GI				

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

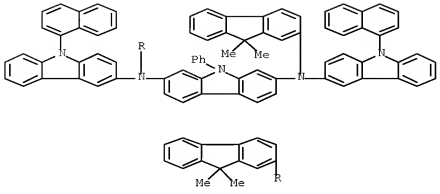
AB Title compds. I [Ar1, Ar2 = aryl (wherein aryl may be substituted with alkyl optionally containing heteroatom selected from S, N, O, etc.) or heteroaryl (containing heteroatom selected from S, N, O, etc.); R1-R9 = H, alkyl, aryl, etc. (wherein alkyl and aryl are optionally substituted with halo, cyano, hydroxy, etc.)] or II [Ar3 = aryl (wherein aryl may be substituted with alkyl optionally containing heteroatom selected from S, N, O, etc.) or heteroaryl (containing heteroatom selected from S, N, O, etc.); R10-R17 = H, alkyl, aryl, etc. (wherein alkyl and aryl are optionally substituted with halo, cyano, hydroxy, etc.)] were prepared For example, Pd(PPh3)4-catalyzed coupling reaction of 2,7-dibromo-9-phenyl-9H-carbazole with phenyl-(9-phenyl-carbazol-3-yl)-amine afforded compound III. Electroluminescent device comprising ITO, III, C-545T, Alq3, LiF, and Al showed 26.84 cd/A and CIE coordinate of (0.281,0.649).

IT 1202685-40-2P 1202685-41-3P 1202685-42-4P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of carbazole derivs. as organic electroluminescent materials)

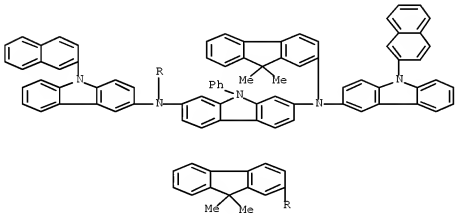
RN 1202685-40-2 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-bis(9,9-dimethyl-9H-fluoren-2-yl)-9-phenyl-N2,N7-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 1202685-41-3 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-bis(9,9-dimethyl-9H-fluoren-2-yl)-N2,N7-bis[9-(1-naphthalenyl)-9H-carbazol-3-yl]-9-phenyl- (CA INDEX NAME)



RN 1202685-42-4 CAPLUS
CN 9H-Carbazole-2,7-diamine, N2,N7-bis(9,9-dimethyl-9H-fluoren-2-yl)-N2,N7-bis[9-(2-naphthalenyl)-9H-carbazol-3-yl]-9-phenyl- (CA INDEX NAME)



OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L8 ANSWER 13 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2009:1160371 CAPLUS Full-text
DOCUMENT NUMBER: 151:392224
TITLE: Novel organic electroluminescent compounds and organic electroluminescent device using the same
INVENTOR(S): Lee, Soo Young; Cho, Young Jun; Kwon, Hyuck Joo; Kim, Bong Ok; Kim, Sung Min; Yoon, Seung Soo
PATENT ASSIGNEE(S): Gracel Display Inc., S. Korea
SOURCE: Eur. Pat. Appl., 70pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 2103666	A2	20090923	EP 2009-154941	20090311
EP 2103666	A3	20100414		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, AL, BA, RS				
KR 2009100530	A	20090924	KR 2008-25768	20080320
KR 989815	B1	20101029		
JP 2009228004	A	20091008	JP 2009-55896	20090310
CN 101550085	A	20091007	CN 2009-10129663	20090319
US 20090273277	A1	20091105	US 2009-383022	20090319

PRIORITY APPLN. INFO.: KR 2008-25768 A 20080320

OTHER SOURCE(S): CASREACT 151:392224; MARPAT 151:392224

AB Electroluminescent compds. are described which comprise anthracene derivs. substituted at the 9 and 10 positions, and ≥1 other position, by substituents described by the general formulas -N(-Ar1-R1)(-Ar2-R2) and -A-N(-Ar1-R1)(-Ar2-R2) (A = optionally substituted C6-60 arylene or optionally substituted C5-60 heteroarylene; Ar1-2 = independently selected optionally substituted C6-60 arylene or optionally substituted C4-60 heteroarylene; and R1-2 = independently selected H, D, halo, C1-60 (halo)alkyl, 5- or 6-membered heterocycloalkyl, C6-60 aryl, etc.). Organic electroluminescent devices, including white light-emitting devices, employing the derivs. in an organic layer between electrods are also described.

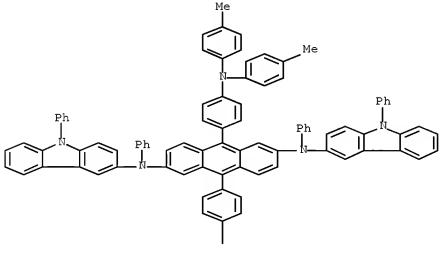
IT 1187838-34-1

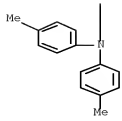
RL: MOA (Modifier or additive use); PRPH (Prophetic); TEM (Technical or engineered material use); USES (Uses)
(electroluminescent anthracene derivs. and organic electroluminescent devices using them)

RN 1187838-34-1 CAPLUS

CN INDEX NAME NOT YET ASSIGNED

PAGE 1-A





OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITINGS)

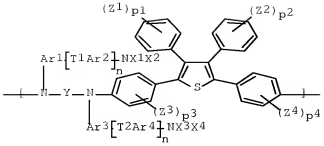
L8 ANSWER 14 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2008:1282001 CAPLUS Full-text
DOCUMENT NUMBER: 149:494318
TITLE: Sulfonated polymeric compound, its intermediate, and organic electroluminescent device containing the compound
INVENTOR(S): Sekiguchi, Michiru; Togashi, Kazuhiko
PATENT ASSIGNEE(S): Mitsui Chemicals, Inc., Japan
SOURCE: PCT Int. Appl., 165pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008126393	A1	20081023	WO 2008-JP861	20080403

W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

PRIORITY APPLN. INFO.: JP 2007-98103 A 20070404
GI



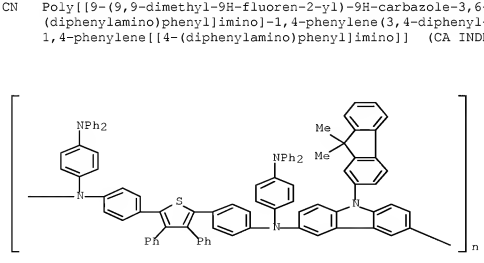
I

AB A sulfonated polymeric compound, and its intermediate, which sulfonated polymeric compound is characterized by having the structure resulting from introduction of a sulfo group in a polymeric compound having, in its polymer chain, ≥1 of the repeating units (I) (wherein each of Z1 to Z4 is a substituent; each of p1 and p2 is an integer of 0 to 5; each of p3 and p4 is an integer of 0 to 4; each of X1 to X4 is a monovalent aromatic group, provided that X1 and X2, and X3 and X4, may be bonded with each other to thereby form a ring; Y is a bivalent aromatic group; each of Ar1 to Ar4 independently is a bivalent aromatic group, provided that the bivalent aromatic group may be an aromatic group resulting from bonding of aromatic groups to each other leading to cyclization; each of T1 and T2 independently is a single bond or a group selected from the group consisting of -(CH2)t-, -CH=CH-, -C≡C-, -O-, -S-, -CQ1Q2-, -CO-, -SO-, -SO2- and -SiE2-; t is an integer of 1 to 20; each of Q1 and Q2 is an alkyl or an aromatic group, provided that these may be bonded with each other to thereby form a ring; E is a hydrogen atom, an alkyl or an aromatic group; and each of m and n is an integer of 0 to 2).

IT 1072155-70-4DP, sulfonated compound
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manufacture of solvent-soluble sulfonated polymeric compds. and their intermediates useful for organic electroluminescent devices)

RN 1072155-70-4 CAPLUS

CN Poly[[9-(9,9-dimethyl-9H-fluoren-2-yl)-9H-carbazole-3,6-diyl][[4-(diphenylamino)phenyl]imino]-1,4-phenylene(3,4-diphenyl-2,5-thiophenediyl)-1,4-phenylene[[4-(diphenylamino)phenyl]imino]] (CA INDEX NAME)

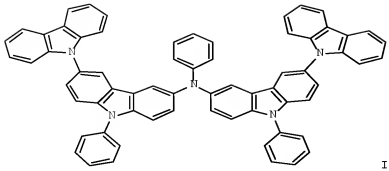


RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(manuf. of solvent-sol. sulfonated polymeric compds. and their intermediates useful for org. electroluminescent devices
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 15 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2008:608032 CAPLUS Full-text
DOCUMENT NUMBER: 148:572612
TITLE: Novel carbazole derivative and use thereof
INVENTOR(S): Nakayama, Masami; Tsubaki, Tomoyuki
PATENT ASSIGNEE(S): Bando Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 88pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008059943	A1	20080522	WO 2007-JP72246	20071109
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2008127290	A	20080605	JP 2006-310825	20061116
KR 2009089332	A	20090821	KR 2009-7010337	20071109
EP 2100880	A1	20090916	EP 2007-831976	20071109
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR				
US 20100145067	A1	20100610	US 2009-515219	20090729
PRIORITY APPLN. INFO.:			JP 2006-310825 A	20061116
			WO 2007-JP72246 W	20071109

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): CASREACT 148:572612; MARPAT 148:572612
GI



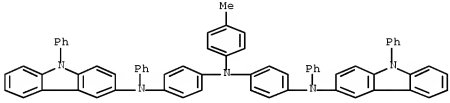
I

AB The carbazole derivative, having ≥2 carbazole structures in the mol., for example, I, is prepared The carbazole derivative can form a stable amorphous film by itself at a temperature equal to or higher than ambient temperature, has a high glass transition temperature, and can be suitably used as an organic electronic functional material, such as an electroluminescent material element.

IT 1026033-63-5P
RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(preparation of heat-resistant carbazole derivs. for electroluminescent materials)

RN 1026033-63-5 CAPLUS

CN 1,4-Benzenediamine, N1-(4-methylphenyl)-N4-phenyl-N4-(9-phenyl-9H-carbazol-3-yl)-N1-[4-[phenyl(9-phenyl-9H-carbazol-3-yl)amino]phenyl]- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 16 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN

ACCESSION NUMBER: 2007:1118739 CAPLUS Full-text

DOCUMENT NUMBER: 147:436460

TITLE: Organic light emitting device and flat panel display device comprising the same

INVENTOR(S): Hwang, Seok--Hwan; Kim, Young-Kook; Kwak, Yoon-Hyun; Lee, Jong-Hyuk; Lee, Kwan-Hee; Chun, Min-Seung

PATENT ASSIGNEE(S): Samsung SDI Co., Ltd., S. Korea

SOURCE: U.S. Pat. Appl. Publ., 49 pp., Cont.-in-part of U.S. Ser. No. 286,421.

CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20070231503	A1	20071004	US 2007-806039	20070529
KR 20050097670	A	20051010	KR 2004-22877	20040402
KR 2006005755	A	20060118	KR 2004-54700	20040714
KR 2006059613	A	20060602	KR 2004-98747	20041129
KR 787425	B1	20071226		
US 20050221124	A1	20051006	US 2005-97182	20050404
US 7737627	B2	20100615		
US 20060020136	A1	20060126	US 2005-181706	20050713
US 7431997	B2	20081007		
US 20060115680	A1	20060601	US 2005-286421	20051125
KR 2007114562	A	20071204	KR 2006-48306	20060529
KR 846586	B1	20080716		
JP 2007318101	A	20071206	JP 2007-110746	20070419
CN 101083308	A	20071205	CN 2007-10109285	20070529
EP 1862524	A1	20071205	EP 2007-109066	20070529
EP 1862524	B1	20090408		
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU				
ES 2323389	T3	20090714	ES 2007-109066	20070529
KR 2007114669	A	20071204	KR 2007-76436	20070730
KR 846608	B1	20080716		
JP 2010222355	A	20101007	JP 2010-68464	20100324
JP 2011023744	A	20110203	JP 2010-224249	20101001

PRIORITY APPLN. INFO.:

KR 2004-22877	A	20040402
KR 2004-54700	A	20040714
KR 2004-98747	A	20041129
US 2005-97182	A2	20050404
US 2005-181706	A2	20050713
US 2005-286421	A2	20051125
KR 2006-48306	A	20060529
JP 2005-342448	A3	20051128
JP 2007-110746	A3	20070419

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 147:436460
GI

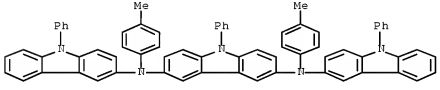
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB An organic light emitting device is described comprising a substrate; a first and a second electrode; one of the electrodes being a reflective electrode, the other being a (semi)transparent; and an organic layer interposed between the electrodes, the organic layer comprising an emission layer, and comprising a compound represented by general formula I, II, and III, where X = C1-C30 alkylene or alkenylene, C6-C30 arylene, C2-C30 heteroarylene, C2-C30 hetero ring; R1-R8 = (each independently) H, C1-C30 alkyl, C1-C30 alkoxy, C6-C30 aryl, C6-C30 aryloxy, C2-C30 hetero ring, C5-C30 polycyclic condensed ring, hydroxy, cyano, amino (R1, R2, R3 may bound together to form ring, R4, R5 may bound together to form a ring, two or more of R6,R7, R8 may bound together to

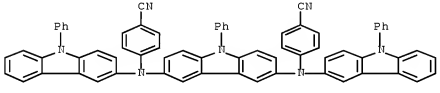
form carbon ring); Ar1, Ar2, Ar3 = (each independently) C6-C30 aryl, C2-C30 heteroaryl; Y = (independently) C1-C30 alkyl, C6-C30 aryl, C2-C30 hetero ring; n (independently) = integer of 0-5. A flat panel display device comprising the organic light emitting device is also described.

IT 873793-77-2 873793-78-3 887403-01-2
887403-02-3 887403-03-4 887403-09-9
887403-10-3 887403-11-4 951407-58-2
951407-72-0 951407-79-7
RL: TEM (Technical or engineered material use); USES (Uses)
(organic light emitting device using novel organic materials and flat panel display device comprising the same)

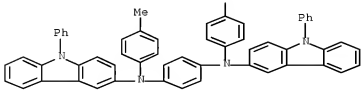
RN 873793-77-2 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-methylphenyl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 873793-78-3 CAPLUS
CN Benzonitrile, 4,4'-[(9-phenyl-9H-carbazole-3,6-diyl)bis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)

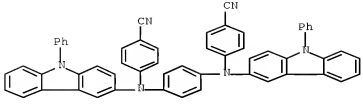


RN 887403-01-2 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis(4-methylphenyl)-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

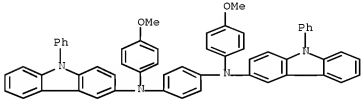


RN 887403-02-3 CAPLUS
CN Benzonitrile, 4,4'-[1,4-phenylenebis[(9-phenyl-9H-carbazol-3-yl)imino]]bis-

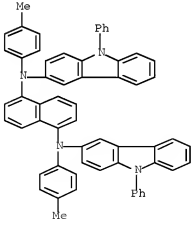
(CA INDEX NAME)



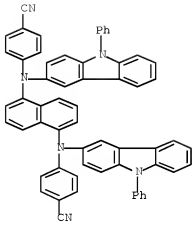
RN 887403-03-4 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis(4-methoxyphenyl)-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



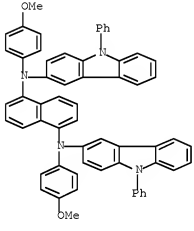
RN 887403-09-0 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis(4-methylphenyl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



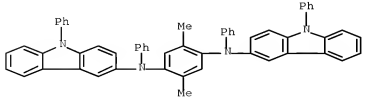
RN 887403-10-3 CAPLUS
CN Benzonitrile, 4,4'-[1,5-naphthalenediylbis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



RN 887403-11-4 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis(4-methoxyphenyl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

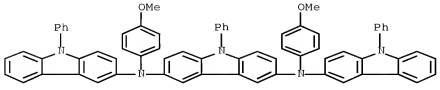


RN 951407-58-2 CAPLUS
CN 1,4-Benzenediamine, 2,5-dimethyl-N1,N4-diphenyl-N1,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

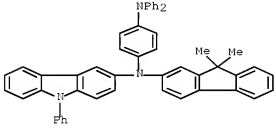


RN 951407-72-0 CAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-methoxyphenyl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 951407-79-7 CAPLUS
CN 1,4-Benzenediamine, N1-(9,9-dimethyl-9H-fluoren-2-yl)-N4,N4-diphenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (20 CITINGS)

L8 ANSWER 17 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2007:619691 CAPLUS Full-text
DOCUMENT NUMBER: 147:41962
TITLE: Diaminoarylene compound having carbazolyl group and use thereof for electroluminescent element
INVENTOR(S): Yagi, Tadao; Suda, Yasumasa; Oryu, Yoshitake; Tanaka, Hiroaki; Toba, Yasumasa
PATENT ASSIGNEE(S): Toyo Ink Manufacturing Co., Ltd., Japan
SOURCE: PCT Int. Appl., 193pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007063986	A1	20070607	WO 2006-JP324094	20061201

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

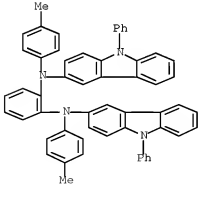
JP 4211869	B2	20090121	JP 2007-528500		20061201
KR 2008080513	A	20080904	KR 2008-7013038		20080530
CN 101321728	A	20081210	CN 2006-80045215		20080602
PRIORITY APPLN. INFO.:			JP 2005-349151	A	20051202
			JP 2006-65680	A	20060310
			JP 2006-205844	A	20060728
			JP 2006-212941	A	20060804
			WO 2006-JP324094	W	20061201

OTHER SOURCE(S): MARPAT 147:41962

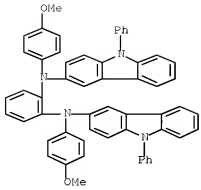
AB Disclosed is a diaminoarylene compound having a carbazolyl group, which is represented by the general formula (Ar3)(Ar1)N-X-N(Ar2)(Ar4) [wherein Ar1 to Ar4 independently represent a univalent aromatic hydrocarbyl having 6 to 18 carbon atoms which may has a substituent, a univalent heterocyclic group having 2 to 18 carbon atoms which may have a substituent, or a 3-carbazolyl-derived group, provided that at least one of Ar1 to Ar4 represents a 3-carbazolyl-derived group; and X represents a phenanthrene-diyl-derived group which may have a substituent, an o-phenylene-derived group which may have a substituent, or an m-phenylene-derived group which may have a substituent]. Also disclosed is a material for an organic electroluminescence element, which comprises the diaminoarylene compound Further disclosed is an electroluminescence element using the material.

IT 938511-04-7P 938511-06-9P 938511-09-2P
938511-25-2P 938511-29-6P 938511-31-0P
938511-34-3P 938511-43-4P 938511-45-6P
938511-52-5P 938511-53-6P 938511-54-7P
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(diaminoarylene compound having carbazolyl group and use thereof for electroluminescent element)

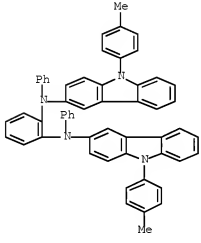
RN 938511-04-7 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis(4-methylphenyl)-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



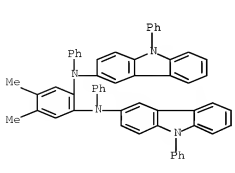
RN 938511-06-9 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis(4-methoxyphenyl)-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



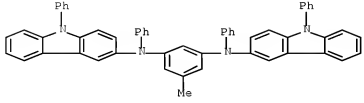
RN 938511-09-2 CAPLUS
CN 1,2-Benzenediamine, N1,N2-bis[9-(4-methylphenyl)-9H-carbazol-3-yl]-N1,N2-diphenyl- (CA INDEX NAME)



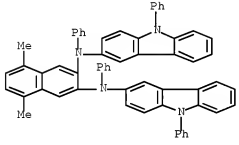
RN 938511-25-2 CAPLUS
CN 1,2-Benzenediamine, 4,5-dimethyl-N1,N2-diphenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



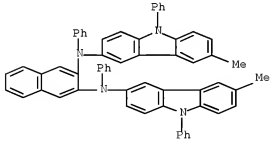
RN 938511-29-6 CAPLUS
CN 1,3-Benzenediamine, 5-methyl-N1,N3-diphenyl-N1,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



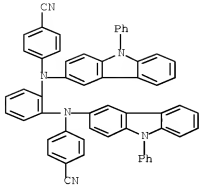
RN 938511-31-0 CAPLUS
CN 2,3-Naphthalenediamine, 5,8-dimethyl-N2,N3-diphenyl-N2,N3-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



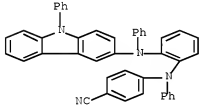
RN 938511-34-3 CAPLUS
CN 2,3-Naphthalenediamine, N2,N3-bis(6-methyl-9-phenyl-9H-carbazol-3-yl)-N2,N3-diphenyl- (CA INDEX NAME)



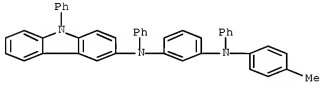
RN 938511-43-4 CAPLUS
CN Benzonitrile, 4,4'-[1,2-phenylenebis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



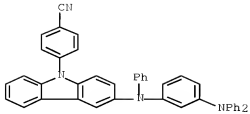
RN 938511-45-6 CAPLUS
CN Benzonitrile, 4-[phenyl[2-[phenyl(9-phenyl-9H-carbazol-3-yl)amino]phenyl]amino]- (CA INDEX NAME)



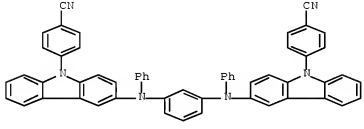
RN 938511-52-5 CAPLUS
CN 1,3-Benzenediamine, N1-(4-methylphenyl)-N1,N3-diphenyl-N3-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



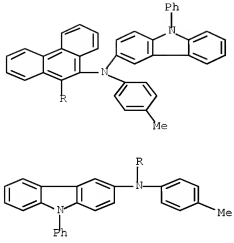
RN 938511-53-6 CAPLUS
CN Benzonitrile, 4-[3-[[3-(diphenylamino)phenyl]phenylamino]-9H-carbazol-9-yl]- (CA INDEX NAME)



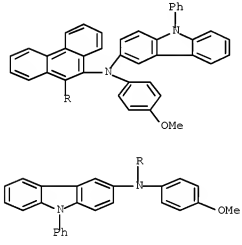
RN 938511-54-7 CAPLUS
CN Benzonitrile, 4,4'-[1,3-phenylenebis[(phenylimino)-9H-carbazole-3,9-diyl]]bis- (CA INDEX NAME)



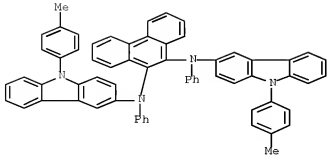
IT 938510-55-5 938510-57-7 938510-60-2
938510-70-4 938510-78-2 938510-80-6
938510-82-8 938510-92-0 938510-93-1
938510-94-2 938511-58-1 938511-62-7
938511-73-0
RL: TEM (Technical or engineered material use); USES (Uses)
(diaminoarylene compound having carbazolyl group and use thereof for electroluminescent element)
RN 938510-55-5 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis(4-methylphenyl)-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



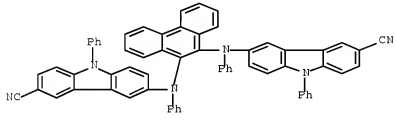
RN 938510-57-7 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis(4-methoxyphenyl)-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



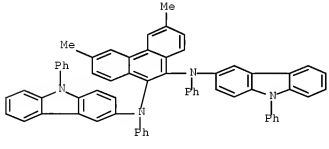
RN 938510-60-2 CAPLUS
CN 9,10-Phenanthrenediamine, N9,N10-bis[9-(4-methylphenyl)-9H-carbazol-3-yl]-N9,N10-diphenyl- (CA INDEX NAME)



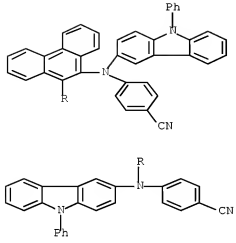
RN 938510-70-4 CAPLUS
CN 9H-Carbazole-3-carbonitrile, 6,6'-[9,10-phenanthrenediylbis(phenylimino)]bis[9-phenyl- (CA INDEX NAME)



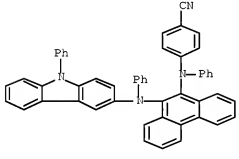
RN 938510-78-2 CAPLUS
CN 9,10-Phenanthrenediamine, 3,6-dimethyl-N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



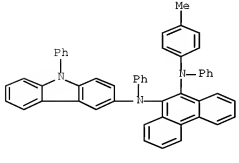
RN 938510-80-6 CAPLUS
CN Benzonitrile, 4,4'-[9,10-phenanthrenediylbis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



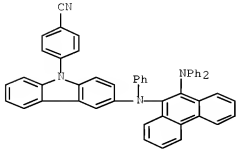
RN 938510-82-8 CAPLUS
CN Benzonitrile, 4-[phenyl[10-[phenyl(9-phenyl-9H-carbazol-3-yl)amino]-9-phenanthrenyl]amino]- (CA INDEX NAME)



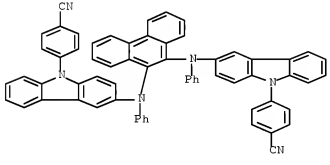
RN 938510-92-0 CAPLUS
CN 9,10-Phenanthrenediamine, N9-(4-methylphenyl)-N9,N10-diphenyl-N10-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



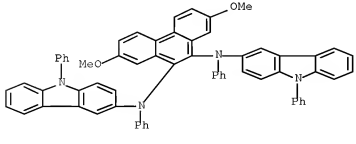
RN 938510-93-1 CAPLUS
CN Benzonitrile, 4-[3-[[10-(diphenylamino)-9-phenanthrenyl]phenylamino]-9H-carbazol-9-yl]- (CA INDEX NAME)



RN 938510-94-2 CAPLUS
CN Benzonitrile, 4,4'-[9,10-phenanthrenediylbis[(phenylimino)-9H-carbazole-3,9-diyl]]bis- (CA INDEX NAME)

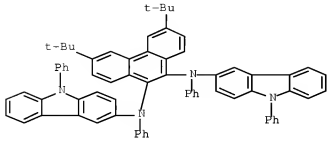


RN 938511-58-1 CAPLUS
CN 9,10-Phenanthrenediamine, 2,7-dimethoxy-N9,N10-diphenyl-N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

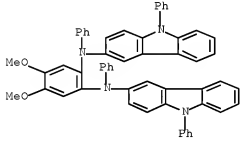


RN 938511-62-7 CAPLUS
CN 9,10-Phenanthrenediamine, 3,6-bis(1,1-dimethylethyl)-N9,N10-diphenyl-

N9,N10-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 938511-73-0 CAPLUS
CN 1,2-Benzenediamine, 4,5-dimethoxy-N1,N2-diphenyl-N1,N2-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 18 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2006:510780 CAPLUS Full-text
DOCUMENT NUMBER: 144:497862
TITLE: Phenylcarbazole-based compound and organic electroluminescent device employing the same
INVENTOR(S): Hwang, Seok-Hwan; Kim, Young-Kook; Lee, Chang-Ho; Lee, Seok-Jong; Yang, Seung-Gak; Kim, Hee-Yeon
PATENT ASSIGNEE(S): Samsung Sdi Co., Ltd., S. Korea
SOURCE: Eur. Pat. Appl., 34 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1661888	A1	20060531	EP 2005-111348	20051128
EP 1661888	B1	20081112		

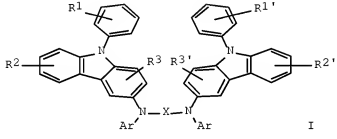
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU

KR 2006059613	A	20060602	KR 2004-98747		20041129
KR 787425	B1	20071226			
JP 2006151979	A	20060615	JP 2005-342448		20051128
JP 4589223	B2	20101201			
CN 1978441	A	20070613	CN 2005-10121732		20051129
JP 2010222355	A	20101007	JP 2010-68464		20100324
PRIORITY APPLN. INFO.:			KR 2004-98747	A	20041129
			JP 2005-342448	A3	20051128

OTHER SOURCE(S): CASREACT 144:497862; MARPAT 144:497862

GI



I

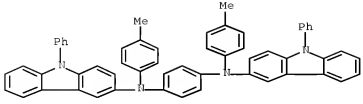
AB Phenylcarbazole-based compound is represented by I [X = e.g., (un)substituted alkylene, alkenylene, arylene, heteroarylene; all R groups selected from, e.g., H, (un)substituted alkyl, alkoxy aryl, aryloxy; Ar = aryl, heteroaryl] and has superior elec. properties and charge transport abilities, and thus is useful as a hole injection material, a hole transport material, and/or an emitting material which is suitable for fluorescent and phosphorescent devices of all colors, including red, green, blue, and white colors. The phenylcarbazole-based compound is synthesized by reacting carbazole with diamine. The organic electroluminescent device manufactured using the phenylcarbazole-based compound has high efficiency, low voltage, high luminance, and a long lifespan. Thus, e.g., coupling of N,N'-diphenylbenzidine (preparation given) with 3-iodo-N-phenylcarbazole (preparation given) afforded target compound 1 = I (X = 1,1'-biphenyl-4,4'-diyl; all R groups = H; Ar = Ph; 70%); an organic electroluminescent device comprising ITO anode/target compound 1 (HIL, 600°); NPB (HTL, 300Å); codeposited IDE140 (blue fluorescent host) + IDE105 (blue fluorescent dopant) (weight ratio 98:2, EML, 200Å); Alq3 (ETL, 300Å); LiF (EIL, 10Å); and Al (cathode, 3000 Å) exhibited a driving voltage of 7.1 V, luminance of 3214 cd/m2, color coordination (0.14, 0.15), and luminous efficiency of 6.43 cd/A at c.d. of 50 mA/cm2 vs. driving voltage of 8.0 V, luminance of 3024 cd/m2, color coordination (0.14, 0.15), and luminous efficiency of 6.05 cd/A at c.d. of 50 mA/cm2 for the comparative device in which IDE 406 was used instead of target compound 1 for the HIL.

IT 887402-01-2 887402-02-3 887403-03-4
887402-09-0 887403-10-3 887403-11-4
RL: DEV (Device component use); USES (Uses)
(organic electroluminescent device employing phenylcarbazole-based compds. and the preparation thereof)

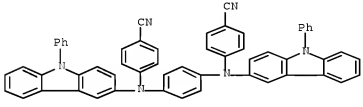
RN 887403-01-2 CAPLUS

CN 1,4-Benzenediamine, N1,N4-bis(4-methylphenyl)-N1,N4-bis(9-phenyl-9H-

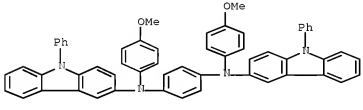
carbazol-3-yl)- (CA INDEX NAME)



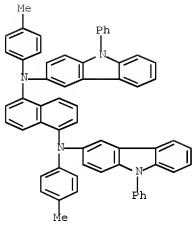
RN 887403-02-3 CAPLUS
CN Benzonitrile, 4,4'-[1,4-phenylenebis[(9-phenyl-9H-carbazol-3-yl)imino]]bis-
    (CA INDEX NAME)



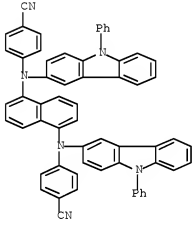
RN 887403-03-4 CAPLUS
CN 1,4-Benzenediamine, N1,N4-bis(4-methoxyphenyl)-N1,N4-bis(9-phenyl-9H-
    carbazol-3-yl)- (CA INDEX NAME)



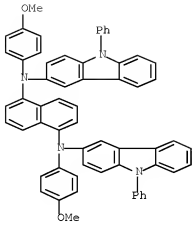
RN 887403-09-0 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis(4-methylphenyl)-N1,N5-bis(9-phenyl-9H-
    carbazol-3-yl)- (CA INDEX NAME)



RN 887403-10-3 CAPLUS
CN Benzonitrile, 4,4'-[1,5-naphthalenediylbis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



RN 887403-11-4 CAPLUS
CN 1,5-Naphthalenediamine, N1,N5-bis(4-methoxyphenyl)-N1,N5-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (13 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

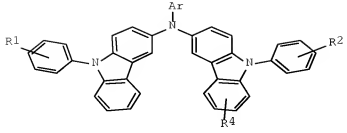
L8 ANSWER 19 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2006:79285 CAPLUS Full-text
DOCUMENT NUMBER: 144:159926
TITLE: Phenylcarbazole compounds and organic electroluminescence devices using the same
INVENTOR(S): Hwang, Seok-Hwan; Lee, Seok-Jong; Kim, Young-Kook; Yang, Seung-Gak; Kim, Hee-Yeon; Lee, Chang-Ho
PATENT ASSIGNEE(S): Samsung SDI Co., Ltd., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 22 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20060020136	A1	20060126	US 2005-181706	20050713
US 7431997	B2	20081007		
KR 2006005755	A	20060118	KR 2004-54700	20040714
JP 2006028176	A	20060202	JP 2005-198787	20050707
JP 4458361	B2	20100428		
CN 1763006	A	20060426	CN 2005-10116009	20050714
CN 1763006	B	20100908		
US 20070231503	A1	20071004	US 2007-806039	20070529

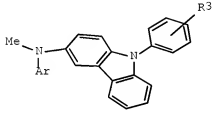
PRIORITY APPLN. INFO.:

KR 2004-54700	A	20040714
KR 2004-22877	A	20040402
KR 2004-98747	A	20041129
US 2005-97182	A2	20050404
US 2005-181706	A2	20050713
US 2005-286421	A2	20051125
KR 2006-48306	A	20060529

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 144:159926
GI



I



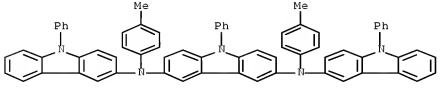
II

AB Phenylcarbazole compds. are described by the general formula I (R1 and R2 = independently selected monosubstituted or polysubstituted groups selected from H, (un)substituted C1-30 alkyl, (un)substituted C6-30 aryl, (un)substituted C4-30 heterocyclic, and (un)substituted C6-30 condensed polycyclic groups, wherein groups adjacent to R1 and R2 can bind and form an (un)saturated cyclic hydrocarbon group; Ar = (un)substituted C6-30 aryl or C6-30 heteroaryl group; R4 = H or II; R3 = a monosubstituted or polysubstituted functional group selected from H, (un)substituted C1-30 alkyl, (un)substituted C6-30 aryl, (un)substituted C4-30 heterocyclic, and (un)substituted C6-30 condensed polycyclic groups; and Ar = (un)substituted C6-30 aryl or C6-30 heteroaryl group). Organic electroluminescent devices with. organic layers incorporating the compds. are also described.

IT 873793-77-2 873793-78-3 873793-82-9
RL: DEV (Device component use); USES (Uses)
(phenylcarbazole compds. and organic electroluminescent devices using them)

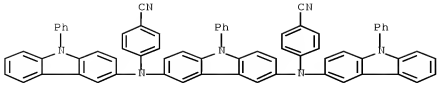
RN 873793-77-2 CAPLUS

CN 9H-Carbazole-3,6-diamine, N3,N6-bis(4-methylphenyl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)

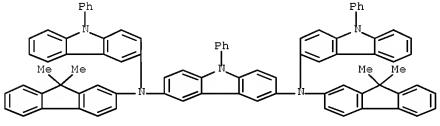


RN 873793-78-3 CAPLUS

CN Benzonitrile, 4,4'-[(9-phenyl-9H-carbazole-3,6-diyl)bis[(9-phenyl-9H-carbazol-3-yl)imino]]bis- (CA INDEX NAME)



RN 873793-82-9 CAPLUS
CN 9H-Carbazole-3,6-diamine, N3,N6-bis(9,9-dimethyl-9H-fluoren-2-yl)-9-phenyl-N3,N6-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT: 3 THERE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITINGS)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 20 OF 20 CAPLUS COPYRIGHT 2011 ACS on STN
ACCESSION NUMBER: 2005:1077993 CAPLUS Full-text
DOCUMENT NUMBER: 143:376607
TITLE: Fluorene-based compound and organic electroluminescent display device using the same
INVENTOR(S): Hwang, Seok-Hwan; Lee, Seok-Jong; Kim, Young-Kook; Yang, Seung-Gak; Kim, Hee-Yeon
PATENT ASSIGNEE(S): Samsung Mobile Display Co., Ltd., S. Korea
SOURCE: U.S. Pat. Appl. Publ., 31 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 5
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050221124	A1	20051006	US 2005-97182	20050404
US 7737627	B2	20100615		
KR 2005097670	A	20051010	KR 2004-22877	20040402
JP 2005290000	A	20051020	JP 2005-106551	20050401
JP 4347831	B2	20091021		
CN 1702065	A	20051130	CN 2005-10069765	20050401
US 20070231503	A1	20071004	US 2007-806039	20070529
PRIORITY APPLN. INFO.:			KR 2004-22877 A	20040402

KR 2004-54700	A	20040714
KR 2004-98747	A	20041129
US 2005-97182	A2	20050404
US 2005-181706	A2	20050713
US 2005-286421	A2	20051125
KR 2006-48306	A	20060529

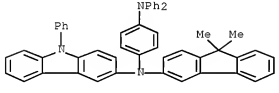
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 143:376607
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

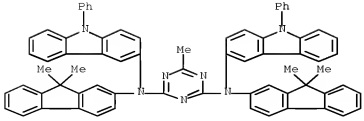
AB A fluorene-based compound represented by the general formula I where Z is represented by the general formula II, III, and IV, where Ar is a substituted or unsubstituted aryl group or a group by the general formula V (X = N, B or P; Y = a single bond, a (un)substituted C1-C30 alkylene group, a (un)substituted C6-C30 arylene group, a (un)substituted C4-C30 heterocyclic group; R1, R2, R3 = H, (un)substituted C1-C30 alkyl group, a (un)substituted C6-C30 aryl group, a (un)substituted C4-C30 heterocyclic group, a (un)substituted C6-C30 condensed polycyclic group, where neighboring groups among R1, R2 and R3 are connected to each other to form a (un)saturated carbon ring; R', R'' = H, a hydroxy group, a (un)substituted C1-C30 alkyl group, a (un)substituted C6-C30 aryl group) is described. An organic electroluminescent display device comprising two electrodes; and an organic layer interposed between the electrodes, wherein the organic layer comprises the fluorene-based compound is also described.

IT 866119-23-5P 866119-44-0P 866119-45-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fluorene-based compound and organic electroluminescent display device using the same)

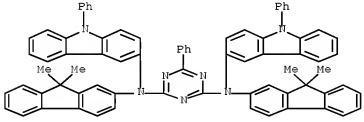
RN 866119-23-5 CAPLUS
CN 1,4-Benzenediamine, N1-(9,9-dimethyl-9H-fluoren-3-yl)-N4,N4-diphenyl-N1-(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 866119-44-0 CAPLUS
CN 1,3,5-Triazine-2,4-diamine, N2,N4-bis(9,9-dimethyl-9H-fluoren-2-yl)-6-methyl-N2,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



RN 866119-45-1 CAPLUS
CN 1,3,5-Triazine-2,4-diamine, N2,N4-bis(9,9-dimethyl-9H-fluoren-2-yl)-6-phenyl-N2,N4-bis(9-phenyl-9H-carbazol-3-yl)- (CA INDEX NAME)



OS.CITING REF COUNT:	7	THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
REFERENCE COUNT:	11	THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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